98

1937.

QUEENSLAND.

ANNUAL REPORT

ON THE

HEALTH AND MEDICAL SERVICES

OF THE

STATE OF QUEENSLAND

FOR THE

YEAR 1936-37.

PRESENTED TO PARLIAMENT BY COMMAND.

BRISBANE:
BY AUTHORITY: DAVID WHYTE, GOVERNMENT PRINTER.

A. 22—1937.

REPORTS UPON THE OPERATIONS OF THE HEALTH AND MEDICAL SERVICES OF THE STATE OF QUEENSLAND.

TO THE HONOURABLE THE MINISTER FOR HEALTH AND HOME AFFAIRS.

Sir,—I have the honour to submit for presentation to Parliament reports regarding the operations of the following Health and Medical Services:—

Department of Health (Sir Raphael Cilento, Kt., M.D.), Director-General of Health and Medical Services.

(Including the Report of the Laboratory of Microbiology and Pathology, E. H. Derrick, M.D.)

Appendix A.—Hookworm Campaign (S. Thompson).

Appendix B.—Government Chemical Laboratory (F. Connah, F.I.C., A.A.C.I.).

Appendix C.—X-ray and other Electro-Medical Equipment Advisory Board.

Appendix D.—State Nutritional Advisory Board.

Hospitals for the Insane (John Coffey, L.R.C.P. and S. (Edin.), L.F.P.S. (Glasg.), D.P.H., R.C.P.S. (Irel.), F.R.C.S. (Edin.)), Inspector of Asylums.

Infant and Child Welfare (A. Jefferis Turner, M.D. Lond., M.R.C.S. Eng.), Director of Child Welfare.

R. W. CILENTO, M.D., B.S. (Adel.), D.T.M. and H. (Eng.),
Director-General of Health and Medical Services.

ANNUAL REPORT

OF THE

DIRECTOR-GENERAL

OF

HEALTH AND MEDICAL SERVICES

FOR THE

Year, 1936-37.

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ANNUAL REPORT OF THE DIRECTOR-GENERAL OF HEALTH AND MEDICAL SERVICES, 1936-37.

SIR,—I have the honour to submit for the information of the Minister the Annual Report of this Department for the year ending 30th June, 1937.

Vital Statistics as under are furnished to enable comparison to be made between this State and the other States of the Commonwealth, as well as other countries inhabited by white races.

It is interesting to note that Queensland still compares more than favourably with other countries in the tabulated statements.

The estimated population of the State on the 1st January, 1937, was 982,134, and that of the metropolitan area 313,430.

CRUDE BIRTH RATE.

Country.	Year.	Birth Rate.	Year.	Birth Rate.
Commonwealth	1935	16·55	1936	17·13
Queensland	1935	18·31	1936	19·17
New South Wales	1935	16·89	1936	17·31
Victoria	1935	15·16	1936	15·63
South Australia	1935	14·14	1936	15·17
Western Australia	1935	18·23	1936	18·84
Tasmania	1935	19·41	1936	19·84
New Zealand	1935	16·13	1936	16·64
England and Wales	1935	14·7	1936	14·8
Scotland	1935	17·8	1936	17·9
Irish Free State	1935	19·2	1936	Not available
Canada	1935	20·2	1936	Not available

DEATH RATE.

Country.	Year.	Death Rate.	Year.	Death Rate.
Commonwealth	1935	9·46	1936	9·43
Queensland	1935	9·16	1936	8·78
New South Wales	1935	9·28	1936	9·14
Victoria	1935	10·03	1936	10·16
South Australia	1935	8·83	1936	9·30
Western Australia	1935	9·25	1936	9·40
Tasmania	1935	10·25	1936	10·34
New Zealand	1935	8·22	1936	8·75
England and Wales	1935	11·7	1936	12·1
Scotland	1935	13·2	1936	13·4
Irish Free State	1935	13·7	1936	Not available
Canada	1935	9·6	1936	Not available

RATES OF INFANTILE MORTALITY IN VARIOUS COUNTRIES.

Country.	Year.	Death Rate per 1,000 Births.	Year.	Death Rate per 1,000 Births.
Commonwealth	1935	39·79	1936	41·16
Queensland	1935	37·26	1936	36·20
New South Wales	1935	39·44	1936	43·47
Victoria	1935	41·21	1936	42·31
South Australia	1935	34·95	1936	31·09
Western Australia	1935	40·15	1936	42·22
Tasmania	1935	51·84	1936	49·55
New Zealand	1935	32·31	1936	30·96
England and Wales	1935	57·	1936	Not available
Scotland	1935	77·	1936	Not available
Irish Free State	1935	67·	1936	Not available
Canada	1935	71·	1936	Not available

Communicable Diseases.

The monthly incidence of infectious diseases notified throughout the State is shown in the following tables. In addition, tables for the calendar year 1936, are furnished as hereunder:—

Communicable Diseases (Exclusive of Venereal Diseases)—1st July, 1936, to 30th June, 1937.

(Metropolitan Area.)

Diseases.	Months.												Totals.		
	1936.						1937.								
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	1936-37.	1935-36.	1934-35.
Anchylostomiasis* ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Anterior Poliomyelitis (acute)	..	..	..	..	..	..	..	..	..	..	..	..	..	2	7
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebro-spinal Meningitis (epidemic) ..	..	..	..	1	..	..	..	..	..	1	..	..	2	..	..
Coastal Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera, Asiatic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	45	40	30	42	57	46	43	18	27	30	50	47	475	594	637
Dysentery, Amœbic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dysentery, Bacillary ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Encephalitis lethargica	..	1	..	..	..	..	..	..	..	..	..	..	1	..	..
Filiariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Leprosy	..	..	..	..	..	..	1	..	..	..	..	..	1	..	..
Malaria	1	..	..	..	..	..	..	..	..	..	..	..	1	2	3
Mossman Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plague (Bubonic or Oriental) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Fever ..	..	3	1	..	1	..	..	..	..	..	..	..	5	7	2
Puerperal Pyrexia ..	..	1	..	1	1	..	2	..	1	..	..	1	7	4	1
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sarina Fever ..	57	46	52	38	44	37	9	17	39	25	56	33	453	449	251
Scarlet Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhoid Fever (includes Paratyphoid)	2	..	2	6	10	7	3	13	4	..	..	3	50	11	20
Typhus Fever (all forms)	..	..	..	..	1	..	..	1	..	..	..	..	2	..	1
Tuberculosis (all forms)	4	12	10	15	14	10	14	17	17	14	10	14	151	101	96
Undulant Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Weil's Disease ..	..	..	..	..	..	..	1	..	..	..	..	..	1	Nil	Nil
Yellow Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals ..	109	103	95	103	128	100	73	66	88	70	116	98	1,149	1,170	1,018
1935–36 Totals	107	106	93	109	94	86	81	88	100	115	88	103	1,170	..	..
1934–35 Totals	107	84	89	84	69	73	77	56	81	99	108	91	1,018	..	..

(Outside Area.)

Diseases.	Months.												Totals.		
	1936.						1937.								
	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	1936-37.	1935-36.	1934-35.
Anchylostomiasis* ..	..	..	..	..	1	2	..	..	..	..	1	..	4	8	2
Anterior Poliomyelitis (acute)	..	..	..	..	..	1	1	1	..	..	..	..	3	12	23
Anthrax	..	1	..	1	..	..	..	..	..	..	..	..	2	Nil	Nil
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil
Cerebro-spinal Meningitis (epidemic) ..	..	..	..	..	..	..	1	1	..	..	..	..	2	3	1
Coastal Fever ..	1	..	..	..	..	..	1	..	..	..	..	1	3	4	46
Cholera, Asiatic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil
Diphtheria	68	70	50	47	46	46	46	25	55	60	53	68	634	772	555
Dysentery, Amœbic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Dysentery, Bacillary ..	..	..	..	..	..	..	..	..	..	1	..	..	1	Nil	6
Encephalitis	..	1	..	..	..	..	..	..	..	..	..	..	1	4	1
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	1
Leprosy	1	1	1	..	..	2	1	..	3	..	..	..	9	5	6
Malaria	2	..	2	..	..	..	..	..	..	..	..	..	4	12	20
Mossman Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	7
Plague (Bubonic or Oriental) ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil
Puerperal Fever ..	3	1	1	1	1	..	..	..	1	2	1	1	12	8	7
Puerperal Pyrexia ..	1	1	..	1	2	..	..	..	1	1	..	..	7	6	7
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	Nil
Sarina Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil
Scarlet Fever ..	34	35	25	30	23	22	20	26	40	38	43	39	375	327	271
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil
Typhoid Fever (inclues Paratyphoid)	1	1	..	3	3	6	8	6	3	3	4	2	40	44	78
Typhus Fever (all forms)	24	1	7	9	4	4	2	12	8	7	..	8	86	34	10
Tuberculosis (all forms)	6	7	15	7	5	14	16	10	12	6	11	9	118	113	105
Undulant Fever ..	Nil	..	..	..	..	..	..	..	..	..	..	..	Not	notifiabl	e
Weil's Disease ..	33	10	2	4	1	..	..	..	2	..	..	..	53	23	6
Yellow Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil
Totals ..	174	129	103	103	86	97	96	81	125	119	113	128	1,354	1,376	1,152
1935-36 Totals	129	95	99	90	112	82	90	94	104	140	143	198	1,376	..	..
1934-35 Totals	128	103	104	108	83	82	79	72	109	87	78	119	1,152	..	..

* See also Appendix A.

ANNUAL STATEMENT OF NOTIFIABLE DISEASES DURING CALENDAR YEAR 1936 (METROPOLITAN AREA).

Diseases.	Months.												Totals.		
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	1936.	1935.	1934
Anchylostomiasis* ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Anterior Poliomyelitis (acute)	..	..	..	2	..	..	..	..	..	..	..	..	2	4	4
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Cerebro-spinal Meningitis	..	..	..	..	..	..	..	..	..	1	..	..	1	Nil	..
Cholera, Asiatic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Coastal Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diphtheria	32	47	60	72	52	56	45	40	30	42	57	46	579	591	731
Dysentery, Amœbic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Dysentery, Bacillary ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Encephalitis	..	..	..	..	..	..	..	1	..	..	..	..	1	Nil	..
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Leprosy	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Malaria	..	1	1	..	..	..	1	..	..	..	..	..	3	1	2
Mossman Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Plague (Bubonic or Oriental)	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Puerperal Fever ..	3	..	..	..	..	1	..	3	1	..	1	..	9	5	4
Puerperal Pyrexia ..	..	..	1	..	..	1	..	1	..	1	1	..	5	3	..
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Sarina Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Scarlet Fever ..	30	27	24	35	25	42	57	46	52	38	44	37	457	387	227
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Tuberculosis (all forms)	14	11	13	5	10	2	4	12	10	15	14	10	120	100	97
Typhoid Fever (includes Paratyphoid)	2	2	1	1	1	Nil	2	Nil	2	6	10	7	34	15	32
Typhus Fever ..	..	..	..	..	..	..	..	..	..	..	1	..	1	Nil	2
Undulant Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Weil's Disease ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Yellow Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	..
Totals ..	81	88	100	115	88	102	109	103	95	103	128	100	1,212	1,106	1,101
1935 Totals ..	77	56	81	99	107	91	107	106	93	109	94	86	1,106	..	..
1934 Totals ..	79	88	93	116	119	100	107	84	89	84	69	73	1,101	..	..
1933 Totals ..	121	100	219	111	99	90	89	80	86	77	95	101	1,268	..	..
1932 Totals ..	157	108	52	61	78	95	101	128	78	110	125	141	1,234	..	..

ANNUAL STATEMENT OF NOTIFIABLE DISEASES DURING CALENDAR YEAR 1936 (OUTSIDE AREAS).

Diseases.	Months.												Totals.		
	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	1936.	1935.	1934.
Anchylostomiasis* ..	..	..	3	1	..	..	..	..	..	..	1	2	7	6	1
Anterior Poliomyletis (acute)	..	3	3	..	..	3	..	..	..	1	..	1	11	17	12
Anthrax	..	..	..	..	..	..	..	1	..	..	..	..	1	Nil	1
Bilharziasis	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil	Nil
Cerebro-spinal Meningitis	..	1	..	1	..	..	..	..	..	..	..	..	2	1	2
Cholera, Asiatic ..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil	Nil
Coastal Fever ..	..	..	..	..	..	3	1	..	..	..	..	..	4	19	28
Diphtheria	39	41	63	77	90	125	68	70	50	47	46	46	762	552	808
Dysentery, Amœbic ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil
Dysentery, Bacillary	..	..	..	..	..	..	..	..	..	..	..	..	..	6	Nil
Encephalitis lethargica	..	..	1	..	..	1	..	1	..	..	..	..	3	3	2
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	1	Nil
Leprosy	..	..	..	1	..	..	1	1	1	..	..	2	6	4	9
Malaria	2	..	..	..	..	..	2	..	2	..	..	..	6	22	996
Mossman Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	9	Nil
Plague (Bubonic or Oriental)	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil
Puerperal Fever ..	..	2	2	1	1	..	3	1	1	1	1	..	13	5	7
Puerperal Pyrexia ..	1	..	2	..	1	..	1	1	..	1	2	..	9	7	6
Relapsing Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	1	Nil
Sarina Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil	Nil
Scarlet Fever ..	25	24	22	39	30	29	34	35	25	30	23	22	338	263	380
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil	Nil
Tuberculosis (all forms)	19.	12	4	14	10	9	6	7	15	7	5	14	122	128	72
Typhoid Fever (includes Paratyphoid)	3	12	2	5	.5	2	1	1	..	3	3	6	43	67	58
Typhus Fever (all forms)	1	..	2	..	3	14	24	1	7	9	4	4	69	20	4
Undulant Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Not noti	fiable.
Weil's Disease ..	..	..	..	..	1	3	33	10	2	4	1	..	54	20	5
Yellow Fever ..	..	..	..	..	..	..	..	..	..	..	..	..	..	Nil	Nil
Totals ..	90	95	104	139	141	189	174	129	103	103	86	97	1,450	1,151	2,391
1935 Totals ..	79	72	109	87	78	119	129	95	99	90	112	82	1,151	..	..
1934 Totals ..	124	125	141	131	138	1,124	128	103	104	108	83	82	2,391	..	..
1933 Totals ..	121	100	219	111	99	90	89	80	86	77	95	101	1,268	..	..
1932 Totals ..	157	108	52	61	78	95	101	128	78	110	125	141	1,234	..	..

* See also Appendix A.

DIPHTHERIA.

The numbers of cases of diphtheria reported for the last three years are as follows:—

—	1936-37.	1935-36.	1934-35.
Brisbane	475	594	637
Outside areas	634	772	555
Totals	1,109	1,366	1,192

SCARLET FEVER.

The total number of cases notified amounted to 828, which is the highest total of any year since 1928, when 848 cases were reported.

The numbers of cases reported for the last three years are as under:—

—	1936-37.	1935-36.	1934-35.
Brisbane	453	449	251
Outside areas	375	327	271
Totals	828	776	522

As mentioned last year, several classes of erythematous eruptions of a doubtful nature, a number streptococcal in origin, occur commonly in Queensland. These vary markedly in virulence and appearance. They result in some confusion in diagnosis among medical practitioners.

During 1937, a considerable series of such cases was masked to some extent by the appearance of German measles, which spread extensively and rapidly in Brisbane and country districts, resulting, in the metropolitan area particularly, in a considerable series of absences from employment. Acute glandular fever, *sensu restrictu,* was also noted.

LEPROSY.

The position as regards leprosy remains practically stationary, as is shown by the following tables:—

INMATES OF PEEL ISLAND LAZARET.

1935-36.

WHITE MALES.

Remaining 1st July, 1935	19	
Admitted	3	
		22
Discharged	4	
Deaths	2	
		6
Total 30th June, 1936		16

WHITE FEMALES.

Remaining 1st July, 1935	5	
Admitted	1	
		6
Discharged	1	
Deaths	—	
		1
Total 30th June, 1936		5

COLOURED MALES.

Remaining 1st July, 1935	27	
Admitted	4	
		31
Discharged	—	
Deaths	2	
		2
Total 30th June, 1936		29

COLOURED FEMALES.

Remaining 1st July 1935	9	
Admitted	4	
		13
Discharged	—	
Deaths	—	
Total 30th June, 1936		13

Total White Inmates, 1935-36	21
Total Coloured Inmates, 1935-36	42

1936-37.

WHITE MALES.

Remaining 1st July, 1936	16	
Admitted	13	
		29
Discharged	5	
Deaths	2	
		7
Total 30th June, 1937		22

WHITE FEMALES.

Remaining 1st July, 1936	5	
Admitted	4	
		9
Discharged	2	
Deaths	1	
		3
Total 30th June, 1937		6

COLOURED MALES.

Remaining 1st July, 1936	29	
Admitted	3	
		32
Discharged	—	
Deaths	1	
		1
Total 30th June, 1937		31

COLOURED FEMALES.

Remaining 1st July, 1936	13	
Admitted	6	
		19
Discharged	2	
Deaths	2	
		4
Total 30th June, 1937		15

Total White Inmates, 1936-37	28
Total Coloured Inmates, 1936-37	46

For several years, at the meetings of the Federal Health Council, the Queensland representative, who is always the professional head of this Department, has stressed the desirability of investigating more fully the incidence of leprosy in the more remote areas of the State. It was felt that this position became more urgent after the representations of various members had resulted in an inquiry being made in the Northern Territory, and in the north-western portions of the State of Western Australia. Considerable numbers of lepers were detected in these regions. In Queensland various small foci of leprosy have been under observation for some years and in one of these the extension of the disease was of sufficient importance to indicate the desirability of a somewhat more ambitious investigation.

On representations being made at the second meeting of the National Health and Medical Research Council for the Commonwealth of Australia, which has replaced the older Federal Health Council, a sum of £500, spread over a period of three years, was allocated. The preliminary observations have already begun, and as the investigation is being conducted in a native aboriginal settlement that represents practically a closed experiment, it is believed that material of considerable interest, from the point of view of epidemiology, will be disclosed.

PLAGUE.

No case of plague has been reported in the State since the year 1922. All precautions possible are taken by Local Authorities in the areas under their control. This Department is mainly concerned with the examination of potentially suspected material. During the year the Department's Laboratory examined 6,138 smears and 32,382 carcases of rodents.

The intensive campaign carried out against rats in the northern sugar districts as a measure of control of Weil's disease is directly valuable also against plague possibilities.

TUBERCULOSIS (ALL FORMS).

The incidence of tuberculosis shows a slight increase, the number of cases reported being 269 as against 214 for 1935-36 and 201 for 1934-35.

During the year an investigation was made into the procedure used in the States of New South Wales and Victoria for controlling the disease, and discussions are at present being continued with the Brisbane and South Coast Hospital Board, with a view to negotiating a set programme of investigation and control at an early date. The Dalby Sanatorium was closed and the patients transferred to Westwood, near Rockhampton, where extensive alterations and additions have been made.

ANCHYLOSTOMIASIS.

The usual campaign measures for the control of this disease have been continued during the year; the details are set out in the report which is attached as Appendix A, and submitted by the officer in charge of the field work. The Consultative Committee on hookworm control, which consists of the Director-General, Deputy Director-General, Chief Medical Officer for Schools, and Chief Protector of Aboriginals, is undertaking a review and reorganisation of the present scheme of operations. As at present constituted, the microscopical work of the campaign is done in the head office at Cairns. School nurses collect specimens, provide treatment, and distribute literature, in accordance with the routine method that has been in use for some years. Male inspectors visit affected homes with a view to the correction of any privy defects or soil pollution. One difficulty is the migratory nature of much of the affected population. Infestation with the disease is often accompanied by few obvious symptoms, and persons in receipt of treatment often move to other areas before they are entirely freed from worms. A proposal for closer linkage of clinical services and in particular baby clinics, child welfare work, hookworm investigation, and antenatal publicity, is at present under consideration.

ENDEMIC TYPHUS FEVER (ALL FORMS).

During the year there were reported 88 cases as against 34 in 1935-36 and 11 in 1934-35.

A considerable range of research into the whole group of short-period fevers in North Queensland has been continued through the year, and is set out fully in the report of the Director, Laboratory of Microbiology and Pathology, below.

WEIL'S DISEASE.

Fifty-four cases have been recorded as against twenty-three cases for 1935-36 and six cases for 1934-35.

As last year, these fifty-four cases do not represent any increase in endemicity of the disease, but indicate more efficient search by medical men provided with better facilities than formerly. The type of case has been extremely mild. Epidemic conditions appear to have been overcome, and the situation in the canefields has returned largely to that characteristic of the area during the last twenty to thirty years. The endeavours of the Department have been greatly assisted by the co-operative activities of the Pest Boards locally established, and the larger part of the work is now performed by these local organisations. The reaction of the community in the affected areas which was formerly one of generalised alarm, has returned to a more normal attitude, and it is significant that for the first time for several years there has been no approach to the Industrial Court for a general order for the burning of all cane farms in the portion of the Hinchinbrook Shire where the epidemic was most severe in 1933-35. An inspector is stationed in each district centred upon a sugar mill, and in conjunction with the cane inspector, and the representatives of the cutting gangs, inspections are made of the fields prior to harvesting. Those in which rat damage is at all common are burned to the extent that the damage justifies. This organisation and regular control has removed any source of local anxiety, and has materially modified any tendency towards industrial unrest in that connection. The cutters have felt that their interests are protected and that no probable source of risk is undisclosed or uncontrolled.

The investigations into the various forms of leptospirosis have continued and have been very largely extended. As a result several scientific papers have been printed and the variations in the clinical and serological reactions have been much better defined.

ENTHETIC DISEASES.

OFFICER IN CHARGE: GEOFFREY SAUTELLE HAYES, M.B., CH.M.

The following particulars indicate the work carried out in connection with the control of venereal disease under the relevant sections of the Health Acts for the current year.

Definition.—For the purposes of the Health Acts the term "venereal disease" includes gonorrhœa, *ophthalmia neonatorum* (gonorrhœal), syphilis (all stages), soft chancre, ulcerative granuloma, and venereal warts. (It should be noted that "gleet" is not notifiable in Queensland as is the case in certain other States.)

INCIDENCE.

Notifications.—During the twelve months under review 1,211 persons were notified (anonymously) as suffering from venereal disease, as compared with 1,125 for the previous twelve months. As some of these patients had more than one co-existent infection they represented 1,214 distinct infections with venereal disease as compared with 1,130 during 1935-36.

Syphilis.—One hundred and eighty-seven of these infections were syphilitic as compared with 124 in 1935-36. Recently acquired syphilis acounted for forty-four of these—which is a considerable increase as compared with the twenty-seven cases for the previous twelve months.

Gonorrhœa.—One thousand and eleven of the infections were for the various gonorrhœal infections (excluding ophthalmia) as compared with 994 in 1935-36.

Other forms of V.D.—These—generally speaking—are much milder infections and account for the remainder of the notification figures.

The following table gives a dissection of the notifications received for the twelve months under review:—

SUMMARY OF NOTIFICATIONS.

Nature of Disease.	District.	Males.	Females.	Totals.	
Single Infections—					
Gonorrhœa—					
Unspecified	Greater Brisbane	26	5	31	79
	Rest of State	40	8	48	
Acute	Greater Brisbane	482	110	592	750
	Rest of State	131	27	158	
Subacute	Greater Brisbane	39	43	82	102
	Rest of State	14	6	20	
Chronic	Greater Brisbane	17	20	37	60
	Rest of State	19	4	23	
Vulvo-vaginitis	Greater Brisbane	..	11	11	17
	Rest of State	..	6	6	
Ophthalmia	Greater Brisbane	..	2	2	4
	Rest of State	2	..	2	
Syphilis—					
Unspecified	Greater Brisbane	5	..	5	10
	Rest of State	3	2	5	
Primary	Greater Brisbane	19	8	27	30
	Rest of State	2	1	3	
Secondary	Greater Brisbane	2	5	7	14
	Rest of State	1	6	7	
Tertiary	Greater Brisbane	24	12	36	63
	Rest of State	17	10	27	
Latent	Greater Brisbane	15	2	17	36
	Rest of State	13	6	19	
Neuro	Greater Brisbane	5	1	6	15
	Rest of State	7	2	9	
Congenital (heredo)	Greater Brisbane	3	8	11	19
	Rest of State	5	3	8	
Soft Chancre	Greater Brisbane	..	..	..	1
	Rest of State	1	..	1	
Ulcerative Granuloma	Greater Brisbane	..	..	..	4
	Rest of State	1	3	4	
Venereal Warts	Greater Brisbane	..	4	4	4
	Rest of State	..	..	..	
Double Infections—					
Gonorrhœa and Gonorrhœa Ophthalmia	Greater Brisbane	..	..	..	2
	Rest of State	2	..	2	
Gonorrhœa and Venereal Warts	Greater Brisbane	1	..	1	1
	Rest of State	..	..	..	
	Greater Brisbane	638	231	869	1,211
	Rest of State	258	84	342	
	Whole State	896	315	1,211	

The following table gives the incidence of notified V.D. infections per 10,000 of population. It must be remembered, however, that, owing to the social and intimate nature of these diseases, such figures certainly do not reveal the true position.

INCIDENCE OF NOTIFIED VENEREAL DISEASE FOR PAST FIVE YEARS.

Year.	Total Cases Notified.	Individual Groups.			Mean Population.	Rate per 10,000 Mean Population.		
		Syphilis.	Gonorrhœa.	Other V.D.		Syphilis.	Gonorrhœa.	Other V.D.
1932–33	1,513	376	1,118	19	940,628	3·99	11·88	0·2
1933–34	1,606	366	1,216	14	950,351	3·85	12·79	0·14
1934–35	1,293	246	1,016	31	960,859	2·56	10·57	0·32
1935–36	1,130	124	994	12	972,190	1·27	10·22	0·12
1936–37	1,214	187	1,011	16	Not available.	..	..	..

RATIO OF NOTIFIED VENEREAL DISEASE INFECTIONS FOR PAST FIVE YEARS.

Year	Ratio of Males to Females.		Ratio of Gonorrhœa to Syphilis (Both Sexes).
	Gonorrhœa.	Syphilis.	
1932–33	2·65	1·49	*3·08
1933–34	2·74	1·45	*3·31
1934–35	3·14	1·59	4·1
1935–36	3·14	1·64	8·01
1936–37	3·13	1·8	5·3

* These years are somewhat "loaded," as syphilis had recently been made notifiable in all stages. The last three years give an average of 5·8; so that in round figures we may assume that gonorrhœa is six times as prevalent as syphilis.

Sources of Notification.—Of the total notifications received 29·2 per cent. were from private practitioners, as compared with 26·2 per cent. last year. The actual figures are shown in the table.

Treatment Centre.	Greater Brisbane.	Rest of State	Totals.
Clinics	446	125	571
Private practitioners	248	106	354
Hospitals (other than Clinics)	175	111	286
Totals	869	342	1,211

Stated Sources of Infection.—Where possible some attempt is made to ascertain the source of infection but at present we lack the specialised facilities and personnel fully to carry out proper epidemiological control.

The following table gives the sources of infection as stated by the patients, and due allowance must be made for their truthfulness:—

Infections ascribed to—	Area.		Totals.
	Greater Brisbane.	Rest of State.	
Prostitutes in houses	23	7	30
Prostitutes unknown	78	47	125
Non-professionals	339	83	422
Husbands	24	7	31
Wives	16	1	17
Sister	..	1	1
Parents	4	5	9
Occupational (prostitutes)	29	4	33
Gins, half-castes, &c.	..	7	7
Extra genital (accidental)	1	..	1
Unknown or unstated	355	179	534
Criminal assault	..	1	1
Totals	869	342	1,211

Defaulters.—During the twelve months there were 293 notifications of default in treatment and, as a result of action, 184 resumptions of treatment. As will be seen in the summary, the majority of these figures refer to the Hope Street Clinic but this is probably as much due to the close and prompt follow-up system pursued in this centre and to the large proportion of nomadic cases as to any really higher incidence of default.

Defaulters.	Male Clinic (Hope Street).	Other than Hope Street.		State Totals.
	Males.	M.	F.	
Notified	237	23	33	293
Resuming treatment	145	15	24	184
Not located	82	5	3	90
Enquiries continuing	4	..	6	10
Left the State	6	3	..	9

CLINICS.

Facilities for treatment are provided by two centres (one male and one female) *ad hoc* in Brisbane. In the extra-metropolitan areas each subsidised public hospital in the State *is required* by law to treat any case applying for treatment and certain of the larger country hospitals have provision for this purpose. Special examination facilities are provided in Brisbane and in certain larger country centres for the periodic examination of prostitutes.

Male Clinic (Hope Street), Brisbane.—This is virtually a continuous clinic with three sessions daily. Its distance from the Laboratory, however, causes much inconvenience at present and all the more urgent bacteriological tests have to be performed in the clinic itself by the medical officer. Though, from the point of view of correlation of clinical and microscopic findings, this arrangement has certain advantages, it introduces some hardship in the form of extra work under difficulty.

The following tables give a fairly comprehensive dissection of activities in the Hope Street Clinic during the year under review:—

MALE CLINIC OPERATIONS, 1936-37.

Patients carried forward from 1935-36	353
New patients registered in 1936-37	689
Total patients attended to, 1936-37	1,042
Patients finalised during 1936-37	789
(*a*) Discharged	697
(*b*) Transferred elsewhere	6
(*c*) Defaulted and untraced to 30th June, 1937	86
Remaining under investigation or treatment on 30th June, 1937	253
Cases notified during 1936-37	406
(*a*) Gonorrhœa—	
Acute	346
Sub-acute	17
Chronic	10
(*b*) Syphilis—	
Primary	13
Early Secondary	2
Tertiary	4
Latent	14
Interviews and consultations with Medical Officer	8,394
Blood specimens submitted to Laboratories—	
W.R. (Qualitative)	868
W.R. (Quantitative)	62
Klein	930
C.F.T. (Gonorrhœa)	475
Smears taken for submission to Laboratories	2,175
Smears taken and examined in Clinic	22
Dark ground examinations performed in Clinic	25
Injections—	
(*a*) Arsenicals	518
(*b*) Heavy metal (mostly Bi)	663
(*c*) Others (vaccines, non-specific therapy, &c.)	93
Prescriptions dispensed (part-time chemist)	2,018
Seamen (Brussels Agreement)—	
Consultations and treatment	20
Personal cards issued	7

Female Clinic (William Street), Brisbane.—This centre, as regards contiguity to the Laboratory, central position and accessibility, is more favourably situated. Four sessions are conducted weekly and all treatments and interviews with patients are carried out by a female staff, comprising a medical officer (part-time) and three nurses, who also attend to the treatment at the Venereal Isolation Hospital.

A short summary of operations with some figures for previous years is shown:—

FEMALE CLINIC ACTIVITIES.

—	1936-37.	1935-36.	1934-35.	1933-34.	1932-33.
Attendances	2,616	1,857	1,492	2,351	2,103
New cases	142	135	115	142	147
Notified (Venereal)	97	81	50	73	77
Injections—					
Arsenical	349	291	260	515	370
Bismuth	224	310	321	407	404
Local treatments	1,991	1,244	937	1,396	1,464

Prostitutes.—Contrary to what is apparently a general impression in some places, both prostitution and "licensed houses" are illegal in Queensland. This, however, does not debar the Department from requiring certain women who become known to them as reputed prostitutes to submit to periodic examination and to detention when found infected.

As will be seen from the table there is a steady diminution in both the numbers examined and the numbers found infected.

EXAMINATION OF PROSTITUTES.

Year.	Greater Brisbane.		Rest of State.	
	Examined.	Detained.	Examined.	Detained.
1930–31	892	71	944	34
1931–32	845	68	956	34
1932–33	637	72	716	25
1933–34	665	54	713	33
1934–35	524	46	826	32
1935–36	465	55	850	35
1936–37	401	29	798	13

INVESTIGATIONS.

Lymphogranuloma Inguinale (*Climatic Bubo*).—On clinical evidence it has been strongly suspected that isolated cases of this disease have made their appearance at the Hope Street Clinic. The difficulty however of securing the Frei antigen at the time prevented the diagosis being confirmed. Through the kindness and courtesy of Dr. Arthur W. Grace, of New York, who has done much to perfect this antigen in a convenient form, and of the Lederle Laboratories, New York, who manufacture it, some Frei antigen was recently procured. We are now endeavouring to trace some of the suspected cases, as a positive reaction persists indefinitely after the disease has apparently subsided. We take this opportunity of expressing our indebtedness to both Dr. Grace and the Lederle Laboratories.

Gonorrhœa.—Recent experience with the sulphonamide group of drugs has suggested they may be of some benefit in the treatment of gonorrhœa, and early in June a start was made to investigate its usefulness in male gonorrhœa. The first results were disappointing, but an article appearing in the J.A.M.A. a few weeks later by Dees and Colston indicated stronger doses and, although (to the date of this report) results have not been so arresting as those quoted by these investigators, they have nevertheless been distinctly encouraging and trials are continuing.

Syphilis.—A rather involved survey of the results of blood tests on both syphilitic and non-syphilitic treated and untreated cases over the last five years is being made with a view to accumulating evidence for and against the sensitivity and specificity of the Wassermann reaction in particular.

Thanks are due and acknowledgment is made for the considerable amount of extra work performed by the Departmental Laboratory in carrying out quantitative tests from time to time, and also to the laboratories of the following institutions for performing tests on serums which have troubled us with equivocal results:—Brisbane Hospital, Sydney Hospital, Board of Health, Sydney, Baker Institute, and Melbourne University.

LABORATORY OF MICROBIOLOGY AND PATHOLOGY.

Director: EDWARD HOLBROOK DERRICK, M.D.

Officer in Charge, Mobile Unit: DAVID WILLIAM JOHNSON, M.B., B.S.

The highlight of the year's work has been the appointment of the mobile unit, consisting of D. W. Johnson, M.B., B.S. (Sydney), and Mr. D. J. W. Smith, B.Sc. (Melbourne).

The unit has proved its value on many occasions by being able to proceed immediately to any centre where investigation has been required. The research output of the laboratory has been doubled since the appointment of the unit.

The staff has also been increased by the addition of a laboratory attendant and a junior typist.

The statistical report shows again the large volume of routine laboratory tests carried out for the Health Department, hospital, and private practitioners.

Special attention has been given to the performance of Wassermann reactions. A large number of these have been carried out in a quantitative way.

The investigation of the unclassified fevers has led to a great increase in the animal experimentation. The breeding stock of guinea pigs has been doubled, and even so it has been necessary to purchase many. It proved impossible to obtain as many white mice as were required. A few have been obtained and the stock is gradually being built up.

No. 1.—Examination of Material for Infectious Diseases.

——	——	Specs. Recd.	Pos.
Diphtheria	Cultures	10,946	1,428
	Direct smears	33	7
	Virulence tests	236	114
Gonorrhœa	Smears	7,353	893
	Blood, complement deviation	661	148
Syphilis	Blood—W. reaction	2,444	628
	Blood—Kline test	1,240	467
	C.S. fluid—W. reaction	38	7
	Serum—Treponema pallidum	6	1
Tuberculosis	Sputum	324	78
	Urine	1	..
	Pus	3	..
	Chest fluid	4	..
	C.S. fluid	1	..
	Guinea-pig inoculation	9	1
Leprosy	Smears (human)	990	124
	Rats	31	31
Typhoid and Paratyphoid	Blood (agglutination)	250	29
	Urine	203	4
	Fæces	214	5
Typhus	Blood (agglutination)	52	2
	Blood (guinea-pig inoculation)	1	..
	Urine (guinea-pig inoculation)	1	..
Undulant Fever	Blood (agglutination)	39	2
	Guinea-pig inoculation	2	..
Leptospirosis	Blood (agglutination)	236	59
	Guinea-pig inoculation	3	1
	Urine (dark-ground examination)	19	4
	Blood culture	3	2
	C.S. fluid	1	..
"Q" Fever	Blood (guinea-pig inoculation)	14	10
	Blood (mouse inoculation)	1	1
	Urine (guinea-pig inoculation)	8	4
	Sputum	1	..
Scarlet Fever	Cultures	44	..

No. 1.—EXAMINATION OF MATERIAL FOR INFECTIOUS DISEASES—*continued.*

—	—	Specs. Recd.	Pos.
Meningitis	Cultures	14	..
	Smears	1	..
	Brain	1	..
	C.S. fluid	1	..
Vincent's Angina	Smears	14	2
Dysentery	Fæces	7	..
Malaria	Blood	11	..
Pneumococcus	Sputum	1	..
	Smear	1	..
	Cultures	3	..
	Brain	1	..
Fungus	Smears	2	..
	Skin scales	1	..
Anthrax	Tissue	1	1
	Brushes	9	..
Ducrey's Bacillus	Smear	1	..
Various Organisms	Pleural fluid	4	..
	Sputum	12	..
	Blood smears	4	..
	Urine	34	..
	Smears	4	..
	Cultures	8	..
	Vaginal smears	4	..
	C.S. fluid	6	..
	Joint fluid	2	..
	Fæces	2	..
	Pus	1	..
	Blood cultures	1	..
	Blood agglutinations	8	..
	Bone fragment	1	..
Actinomycosis	Smears	2	..
	Totals	25,585	4,053

No. 2.—PATHOLOGICAL EXAMINATION.

—	—	Specs. Recd.	Pos.
Blood	Microscopical examination	6	..
	Basophilia	9	..
	Full count	10	..
	Differential count	28	..
	Leucocyte count	3	..
	Typing	1	..
	Sugar estimation	5	..
	Urea estimation	10	..
	Blood cultures	2	..
Urine	Microscopical examination	75	..
	Chemical examination	27	..
	Urea estimation	238	..
Fæces	Intestinal worms	501	34
	Occult blood	2	..
Seminal fluid	Spermatozoa	2	..
Cerebrospinal Fluid	Cells	4	..
	Globulin	4	..
	Abnormalities	1	..
Stomach Contents	Test meals	4	..
Worms	Tapeworm	3	..
	Roundworm	1	..
Fleas	Identification	128	..
Fly Larvæ	..	1	..
Tissue	Section	57	..
	Section (post mortem)	31	..
	Totals	1,153	34

The ecto-parasite removed from rats by the Brisbane City Council and submitted for identification were classified as follows:—

Xenopsylla cheopis	68
Leptopsylla musculi	19
Ctenocephalus felis	15
Liponyssus bacoti	8
Mallophaga (lice)	18
	128

No. 3.—Foods, Waters, &c.

Water—	
Bacterial count	127
Colon bacilli	127
E. typhosa	3
Yeast cells	1
Milk—	
Bacterial count	930
M. tuberculosis	2
Blood	7
Various organisms	23
Guinea-pig inoculation (M. tuberculosis)	3
Ice cream—	
Bacterial count	15
Oysters—	
Bacterial count	1
Cheese—	
Organisms	3
Bread—	
Rope	2
	1,244

No. 4.—Various Materials.

Disinfectant—	
Coefficient	10
Oil—	
Coefficient	1
Fly spray	1
Cat gut—	
Clostridium tetani	3
	15

No. 5.—Special Investigations.

Guinea-pig agglutinations	10
Rabbit agglutinations	142
Rat agglutinations	22
Guinea-pig inoculation	492
Rabbit inoculation	18
Mouse inoculation	22
Rat inoculation	14
Urine (dark-ground examination)	123
Animal tissue for section	23
Guinea-pig—Post mortem	162
Rabbit—Post-mortem	7
Mice—Post Mortem	19
Rat—Post Mortem	45
Rats—Leptospiræ	135
Bovine spleens for "Q" fever	27
Sheep spleens for "Q" fever	39
Pig spleens for "Q" fever	28
	1,328

No. 6.—Medico-legal.

Post-mortem examinations	243
Post-mortem examination (dog)	1
Blood—	
Stains from railway carriage	1
Wood splinters	1
Clothing	23
Axe	1
Knives	2
Various articles	16

No. 6—Medico-legal—*continued.*

Blood—*continued.*	
Soil	1
Twig	1
Cork	1
Burnt material	1
Shoes	1
Tissue—Section	1
Pus—Organisms	1
Seminal Stains—	
Clothing	26
Various articles	4
Spermatozoa—	
Smears	20
Clothing	11
Various articles	3
Swab	1
Gonorrhœa—	
Smears	14
Swabs	2
Clothing	2
Various articles	1
Nature—Various articles	5
Bones	2
Teeth	1
Hair—Crank handle	1
Attendances at courts—	
Police Court	14
Supreme Court	9
Coroner's Court	7
	418

No. 7.—Vaccines Prepared.

Cultures	18
Sputum	5
Urine	7
Faeces	6
Nasal Swabs	6
Pus	1
	43

No. 8.—Examination of Rodents for Plague.

Rodents received for examination for Brisbane City Council:—

Rattus norvegicus	21,472
Rattus rattus rattus	2,118
Rattus rattus alexandrinus	3,592
Hydromys leucogaster	2
Unclassified (very young rats)	3,879
Mus musculus	1,319
	32,382

(In addition to these, 6,001 rats and 1,081 mice were destroyed by the Brisbane City Council without examination.)

Rat smears received from other centres:—

Mackay	27
Bundaberg	1,012
Maryborough	680
Gympie	49
Ipswich	1,829
Sandgate	848
Wynnum	906
Meat Works (Brisbane area)	787
	6,138

No rat was found infected with *Pasteurella pestis.*

Grand total of examinations for year 1936-37, 68,306.

Material Supplied.

Five hundred and twenty-four (524) requisitions were supplied during the year to hospitals, private practitioners, and local authorities, consisting of 28,590 swabs, 30,052 cultures, 1,240 Wright's capsules, 120 sterile water bottles, 1,870 fæces tins, 108 urine bottles, 2,640 glass slides, 12 agar slopes, 10 agar stabs, 21 blood agar plates, 56 blood phials, 7,275 ccs. of T.A.B. Vaccine, 3 bottles 6 per cent. Alepol, 4 bottles 3 per cent. Alepol, 120 ccs. Antipoliomyelitis serum, and 120 ccs. Leptospirosis serum.

CULTURE MEDIA PREPARED.

	Number of tubes.
Serum cultures—	
Ox serum slopes	27,736
Ox serum plates	18
Bottles	48
Human serum plates	80
Human serum slopes	24
Ordinary Broth—	
Small tubes	843
Large tubes (disinfectant)	691
Bottles	18
Ordinary Agar—	
Small slopes	647
Large slopes	689
Sugars—	
Lactose	661
Glucose	312
Mannite	124
Inosite	206
Glycerine	199
Dulcite	202
Salacin	208
Xylose	75
Erythrite	43
Arabinose	41
Saccharose	257
Galactose	51
Dentrin	39
Maltose	104
Adonite	47
Sorbite	49
Raffinose	46
Other tubes and plates—	
Treble Lactose	123
Endo's Medium for E. coli (plates)	611
Methyl Red Medium (tubes)	208
Peptone Water for Indol (tubes)	219
Medium for Voges-Proskauer Reaction (tubes)	180
Sodium Citrate Medium (tubes)	272
Litmus Milk (tubes)	53
McConkey's Medium (plates)	1,222
Blood Agar (plates)	141
Gelatin (tubes)	34
Fletcher's Medium for Leptospira (tubes)	161
Schuffner's Medium for Leptospira (tubes)	850
	37,832

Material in bulk—	
Agar (for count purposes)	52 litres
Lemco Broth	5½ litres
Alepol 6 per cent. solution	1540 ccs.
Alepol 3 per cent. solution	1710 ccs.
Kaiserling Solutions No. I.	52 litres
Kaiserling Solutions No. II.	173 litres

UNCLASSIFIED FEVERS.

Work on the unclassified fevers of the coastal districts of South Queensland has proceeded steadily through the year. Interest has centered mainly in two fever-types, "Q" fever and seven-day fever. The latter is due to a *leptospira* of mild virulence.

"Q' fever is caused by an organism belonging to the *Rickettsiæ*. It does not correspond to any fever previously described in Australia or elsewhere, though closely resembling certain mild fevers in other countries, and it has been provisionally named "Q" fever. Brief reference was made to it in last year's annual report. It is now possible to give in more detail its main features.

"Q" FEVER.

Incidence.—For some years it has been rumoured that a "serious and alarming" complaint was common in Brisbane, and this was called colloquially "abattoir" fever. It was believed that it was associated only with the abattoir.

As a result of most careful investigations carried out over a period of eighteen months, it has been demonstrated that this is untrue.

Widespread throughout Queensland, as in many other tropical and semi-tropical countries, are numerous mild diseases, and numbers of these are associated with organisms of the *rickettsia* class.

As stated last year, the name "abattoir" fever applied to this disease is entirely unjustified. It is probable that it occurs over a wide part of Southern Queensland. As for its frequency, up till the end of the year 1936—that is, during a period of sixteen months—nine cases only had been proved to be "Q" fever. The cases were widely separated, except for a tendency to occur in pairs.

Early in 1937 one of the small occasional outbreaks produced thirteen cases in two months, where the diagnosis was proved by laboratory methods, and seven others unproved but similar clinically.

The cases were all in men: some were farmers, or farm workers, one was a braceman employed on new sewerage construction, one was a laboratory technician engaged in the actual study of the fever itself, and the remaining fifteen were employed at the abattoir. Of these five were meat inspectors and three were working in the tank house.

Intense concentration upon the abattoir made it possible to pick up these men. Of the farmers and others infected, quite obviously there were many out of the range of this laboratory.

If all could be traced it would probably be found that in every year there are many of these cases in Queensland, among farmers and labourers in the country districts, which are unrecognised.

The mildness of the disease was indicated by the fact that of twenty-two cases examined only one case proved fatal, and this was in a man of sixty-two years who was actually suffering from a chronic pulmonary tuberculosis, which would in any case have caused his death. All others recovered readily and completely.

Of the farmers one lived near Brisbane and the others came from Gympie (two cases 106 miles north of Brisbane), Pomona, and Maleny districts.

Similar kinds of fevers are suspected for several hundred miles up the eastern coast, but attract no attention locally because of their mildness.

Clinical Features.—The fever has an acute onset. Within a day or two of the first premonitory symptoms, the patient is in bed quite ill, the temperature rises rapidly to between 39 deg. to 40 deg. C. (102 deg.-104deg. F.) and remains high. Some charts show large daily remissions. These are in part due to the use of antipyretic drugs to relieve the headache, but it is doubtful if this explains them all.

With regard to the duration of the fever there are two distinct types. In the majority of cases, about three out of four, the fever lasts from six to ten days, and its termination is fairly rapid. Occasionally, though not as a rule, the termination is rapid enough to be called a crisis.

In the minority of cases the duration is longer, and the defervescence gradual. In three cases the duration was fourteen, seventeen, and twenty-four days. In another case the course was extremely prolonged. The fastigium of the fever lasted till the twenty-third day, and the fall thereafter was very gradual. There was still a slight evening rise of temperature in the ninth week. It is noteworthy that most of those whose recovery was slower were past middle life.

In two cases out of twenty a relapse has been noticed. It began after one or two days of normal temperature and lasted six or eight days.

The outstanding symptom is headache. All patients but one complained of it, and with most of them it was the chief complaint. They spoke of it as severe, intense, raging. It often was associated with insomnia.

Shivers were commonly present at the onset. Several patients had definite rigors. Sweating was frequent, due in part, but not entirely to the drugs used to relieve the headache.

Photophobia was usually present, the patient lying with eyelids half closed to exclude the light.

Only one patient out of twenty has had a definite rash. It appeared on the fourteenth day and lasted for two days. The absence of a characteristic rash in "Q" fever is an important point in the differential diagnosis from murine typhus.

A feature of "Q" fever is the slow rate of the pulse at the beginning of the illness in comparison with the height of the fever. This was noticeable in practically every case. The slow pulse rate may be of some help in the diagnosis, although other fevers show it too.

There is often tenderness to deep pressure in the region of the spleen, indicating no doubt some inflammation there. Occasionally (two cases out of seventeen) the spleen may be palpated.

Other symptoms which occur occasionally include nausea, vomiting, abdominal distension, cough, epistaxis. Constipation is the rule. The urine almost always contains a little albumin at the beginning of the fever.

The duration of convalescence has varied considerably. Some whose fever ran the shorter course were back at work in two or three weeks after the illness began. At the other extreme was a patient who was still away from work after five months.

The Lymphocyte Reaction in "Q" Fever.—There is no consistent abnormality of the blood cells at the height of the fever. The number of the red cells, the hœmoglobin figure, the total number and proportion of the white cells are all as a rule within normal limits. About the time that the temperature falls to normal the lymphocytes begin to increase. The increase is demonstrable both in the percentage figure (40 to 65 per cent.) and in the absolute number of lymphocytes (3,500 to 5,000 per cubic millimetre). The lymphocytosis continues on this level for at least a week after defervescence. This time relation for the lymphocyte increase has been based on the study of eight cases, in all of which the fever ended rapidly after six to eleven days.

The increase of the lymphocytes is well demonstrated in the following table, showing the total and differential white cell count of Patient 13 from day to day. All the observations were made about 11 a.m.

Day of fever	8	10	..	..	..	..	..	..	..
Day of convalescence ..	..	1	2	3	4	5	6	8	10
Total Leucocytes	8,400	7,200	8,400	8,200	8,800	10,100	9,200	8,600	7,000
Neutrophils, per cent. ..	69	68	47	63	44	46	53	47	46
Neutrophils, per c.mm. ..	5,796	4,896	3,948	5,166	3,872	4,646	4,876	4,042	3,220
Lymphocytes, per cent. ..	31	15·5	42	29	50	42	39	46	42
Lymphocytes, per c.mm. ..	2,604	1,016	3,528	2,378	4,400	4,242	3,588	3,956	2,940
Monocytes, per cent. ..	..	16·5	10	8	4	..	..	5	..
Monocytes, per c.mm. ..	..	1,186	840	656	352	..	..	430	..
Eosinophils, per cent. ..	..	..	1	..	1	..	..	1	..
Basophils, per cent.	..	..	..	..	..	..	..	1	..
					Mild Relapse.				

In one case (Case 20), repeated blood counts have been made to ascertain how long the lymphocytosis lasts. The results are given in the following table, and show a gradual fall to an almost normal figure twenty-nine days after the fever was over. Of interest also is the increased monocyte count shown in the first observation twelve days after defervescence, and its steady return to normal. An upper respiratory infection complicated the counts on the twenty-eighth and twenty-ninth days and, perhaps, influenced the lymphocytosis of the thirty-third day.

Day of convalescence	12	18	21	25	29	33	36
Total Leucocytes	8,840	7,960	7,850	11,720	12,840	9,920	7,840
Neutrophils, per cent.	37	39	44	59	65	53	54
Neutrophils, per c.mm.	3,271	3,105	3,454	6,915	8,346	5,258	4,234
Lymphocytes, per cent.	46	44	43	31	22	37	37
Lymphocytes, per c.mm.	4,066	3,502	3,376	3,543	2,825	3,670	2,902
Monocytes, per cent.	15	13	9	6	7	5	6
Monocytes, per c.mm.	1,326	1,035	706	703	899	496	470
Eosniophils, per cent.	1	2	2	3	5	4	2
Basophils, per cent.	1	2	2	1	1	1	1
				Coryza.			

Fatal Case of "Q" Fever.—One case of "Q" fever proved fatal. This has been the only fatal case to come under notice. The patient was a man of sixty-two years, who had been in failing health before his attack of "Q" fever. He had complained of "chronic bronchitis" and "asthma" for some years. In the light of the X-ray and post-mortem findings, these were symptoms of a chronic pulmonary tuberculosis. His chronic ill-health and his advancing age would have materially contributed to his death.

He belonged to the engineer's department at the abattoir, his duties being the maintenance and repair of machinery. He had been working on the tank-house machinery for the two weeks before becoming ill.

He took ill on 1st June, 1937, with thirst and shooting pains in the head. There were also pains in the loins and left hypochondrium and tightness in the chest. There was a high fever with occasional shivers and sweats. There was loss of appetite and loss of weight. The chief complaint was a sick feeling in the stomach. He was delirious each night.

He was admitted to the General Hospital on 9th June. He then appeared quite ill. His temperature was 101·4 deg., and reached 102 deg. next day. After that it gradually fell. The pulse rate was 98 on admission and varied thereafter between 84 and 118. There were occasional bouts of coughing. The sputum was mucopurulent and not at any time blood stained. Rales and rhonchi were audible all over the lungs and a patch of tubular breathing at the right base. X-ray revealed a chronic bilateral tuberculosis. The liver was enlarged. The spleen, although examined frequently, could not be palpated. There was tenderness along the costal margin on each side.

His condition gradually became worse and he died on 15th June.

A post-mortem examination was made by Dr. J. V. Duhig. Both lungs showed masses of tuberculous infiltration, mostly fibrotic, in some part caseous. There were many scattered anthracotic nodules in the lungs, there was much patchy emphysema, and there were pleural adhesions. There was no pneumonia. There were calcified bronchial glands. The heart muscle appeared normal. There was extensive calcification of the left coronary artery.

The spleen was considerably enlarged, weighing 16 oz. It was dark red and soft. The liver weighed 4 lb. 12 oz. It showed central congestion of the lobules. The terminal piece of small intestine showed patches of intense congestion with desquamation of the mucosa. The other organs showed no significant change.

Blood was taken from the patient on 10th June and injected into a guinea-pig. The guinea-pig ran four days of fever, maximum 106·2 deg., after an incubation period of nine days. A subsequent immunity test showed this to be due to "Q" fever.

A piece of the patient's spleen, obtained at the time of the post-mortem examination, was injected into a new guinea-pig B 147, and into guinea-pig J 63, immune to "Q" fever. B 147 had five days of fever, maximum 106·6 deg., after an incubation period of eight days. The temperature of J 63 showed no significant change. The diagnosis of "Q" fever was therefore definitely established.

"Q" Fever in Guinea-pigs.—Guinea-pigs are susceptible to "Q" fever. They may be infected by injection of blood or urine from human patients or blood or organ emulsion from laboratory animals.

The incubation period varies from one to eighteen days. The larger the dose the shorter is the period. An incubation period of one day occurred after inoculation of heavily-infected mouse spleen. When guinea-pig liver is used the incubation period is usually two to eight days, with human blood or urine eight to fourteen days.

The fever in guinea-pigs lasts usually four to six days, sometimes as few as one, or as many as nine. The temperature may reach 42 deg. C. (107·6 deg. F.), the average maximum of fifty cases being 40·9 deg. C. (105·6 F.). During the time of the fever the guinea-pig becomes limp and loses appetite and the hair stands out. There is failure to gain weight. These signs are not striking. The animal does not as a rule appear very ill. There is no mortality.

A guinea-pig may have an inapparent infection after inoculation with a small dose. There is no rise of temperature or sign of illness. Proof of its infection depends on either (1) the further transmission of the disease from its organs about two weeks after inoculation, or (2) finding it immune when tested with an adequate dose later.

If the guinea-pig is killed during the fever the only constant finding is a moderate enlargement of the spleen. There may be petechiæ in the wall of the cæcum. Otherwise there is no obvious abnormality.

The first strain of the "Q" fever virus to be obtained was put through sixteen passages in guinea-pigs, the second strain through eleven passages. The passaging of one of these strains was discontinued, and soon afterwards the other was lost. A new series was then begun in May, 1936, with another strain, and this has now—June, 1937—gone through thirty-six passages. It does not appear to have altered in any way during the time of observation. Other strains have only been kept long enough to establish their identity with the stock strains.

In infected guinea-pigs the virus is present in quantity in the blood and liver. 0·1 mil of blood taken during the fever will practically always pass on the infection, and successful transmission has been achieved several times with a smaller quantity. Liver is a still richer source of the virus. In one titration experiment one hundred-thousandth of a gram of liver caused infection. Other organs have not been titrated. No doubt the spleen would also contain the virus in abundance. The blood and liver may remain infective for seven days after the fever is over. Four tests of guinea-pig urine have not shown the presence of virus.

One attack of "Q" fever in a guinea-pig confers an immunity, which persists for at least six or twelve months. This immunity is a fact of the greatest importance. Firstly, it provides a method for the specific diagnosis of individual cases, and secondly, it establishes "Q" fever as a distinct entity.

The immunity was first demonstrated by reinoculating guinea-pigs with infective material of the same strain that caused their first infection. Other guinea-pigs, after an attack from one strain, were tested with other strains, obtained from different patients. Then as each subsequent strain was isolated in guinea-pigs, it was tested against one or more of the earlier strains. In this way twenty patients have been proved to have been infected with the same virus.

Of other laboratory animals, rabbits appear to be insusceptible. Wild rats, both *Rattus norvegicus* and *Rattus rattus*, are susceptible, but in them the infection is usually inapparent.

The Specific Diagnosis of "Q" Fever.—In practically all our cases the laboratory diagnosis has been made by inoculation of guinea-pigs with blood or urine from the patient. If blood is used it should be taken during the period of fever, during which time the virus is present in the blood. The specimen of blood may be citrated to facilitate its subsequent injection. If it is allowed to clot, the clot is used for injection and the serum saved for other tests. Samples of blood may be sent from the country as they retain their infectivity quite well for short periods.

If "Q" fever is the likely clinical diagnosis and the blood is obtained at the height of the fever, it should be inoculated into two guinea-pigs, one new and one rendered immune to "Q" fever by an earlier attack. A characteristic febrile reaction in the new pig and none in the immune one will establish the diagnosis of "Q" fever.

If the suspected blood has been inoculated into one guinea-pig only and it reacts, then its blood or liver is used for inoculation of a test pair of guinea-pigs.

The virus may also be present in the urine of human patients, but the results of injecting urine are much less consistent than with blood. It is noteworthy that the successful results with urine were obtained late in the illness or during convalescence. One patient still had the virus in the urine after being afebrile for nineteen days and actually back at work.

The inoculated guinea-pig may get an inapparent infection if the infecting dose is small, as for instance when the sample of blood is obtained just before the fever ends. If, therefore, the test guinea-pig shows no fever for fourteen days, it is then killed and a strong liver emulsion injected into a second guinea-pig. This procedure may be expected to detect an occasional case of "Q" fever that would otherwise be missed.

A febrile reaction in an inoculated guinea-pig would not be in itself sufficient to sustain a diagnosis of "Q" fever. Somewhat similar reactions may be caused by a number of diseases —typhus, leptospirosis, undulant fever, &c. An infection obtained in a guinea-pig must be further tested from the immunity aspect.

The immunity conferred on a guinea-pig by an attack of "Q" fever is specific as far as it has been investigated. There is no cross-immunity with the other febrile diseases which we have given to guinea-pigs in the course of this work—leptospirosis (three types), rat-bite fever, undulant (abortus) fever, and caseous lymphadenitis of sheep. Opportunity has not yet come to test for cross-immunity with fevers of the typhus group.

The guinea-pig method of diagnosis has proved very useful, in fact indispensable, in the study of the disease. From the clinical point of view, however, the long time it takes—two to four weeks—greatly limits its value. A more rapid test would be of great help to the clinician, and attempts are being made to develop other tests. There are two further methods by which a diagnosis may be made, mouse inoculation and serum agglutination. The applicability of these methods in the sphere of diagnosis is as yet only imperfectly worked out.

A method for the diagnosis of "Q" fever may be based on the presence of rickettsiæ in the spleens of infected mice. Such a method would be similar to that used for the diagnosis of psittacosis.

The scarcity of white mice in Brisbane has prevented the exploitation of this method to any extent. One illustrative case may be quoted. Blood of the patient was inoculated intraperitoneally into a white mouse. It was killed twelve days later, and the spleen found greatly enlarged. In a Giemsa stained smear of the spleen one definite colony of rickettsiæ was found.

Some of the same samples of blood was sent to Dr. Burnet, who inoculated it into six mice. One of the two killed at ten days showed a few probable rickettsiæ in the spleen, and both of the two killed at thirteen days showed typical rickettsiæ.

Just how useful this method of diagnosis may be remains for the future to prove. We hope to do much more work on it as mice become available. In the meantime, it may be said that younger mice show rickettsiæ better than older ones, that several mice should be inoculated with each sample of blood to allow examination of the spleen at intervals, and that the differentiation of rickettsiæ from other granules in spleen cells needs considerable experience.

The agglutination test has been devised by Burnet. Heavily infected mouse spleens contain enormous numbers of rickettsiæ, and by differential centrifugation with the angle centrifuge, he has been able to prepare emulsions in which the majority of the particles are rickettsiæ. Such an emulsion was agglutinated microscopically by the serum of five patients convalescent from "Q" fever, as well as by the serum of convalescent monkeys and guinea-pigs. The titre of the reacting sera varied from ½ to 1/200. Normal human and animal sera were not agglutinated.

This test is only in the preliminary stages, but it holds out distinct promise of usefulness. For instance, it made possible the diagnosis of one patient (Number 10) who was not seen until the illness was over and the virus had disappeared from blood and urine. For the agglutination tests the sera have been sent to Burnet, whose courtesy in this respect is greatly appreciated. It is hoped in the coming year to carry out these tests in Brisbane.

The following table shows how the diagnosis was made in each of the twenty-two cases:—

"Q" FEVER.—METHODS OF DIAGNOSIS.

Case Number.	Day of Illness specimen taken.	Guinea-pig Inoculation		Mouse Inoculation.	Agglutination of Rickettsia.
		Blood	Urine		
1	3	+	..	..	..
	12	..	+	..	..
	29	..	+	..	..
2	11	..	—	..	..
	28	..	+	..	..
3	4	+	—	..	..
4	9	+	..	..	..
	14	—	—	..	..
	51	..	—	..	..
5	5	+	—	..	..
	11	..	—	..	..
	21	..	—	..	..
6	3	+	..	..	..
	8	..	—	..	..
7	13	+	—	+ (from guinea-pig.)	
	23	..	+	..	..
	37	—	..	..	+200
	53	..	+	..	..
	79	..	—	..	..
8	6	+	..	..	..
9	4	+	..	..	..
10	18	—	—	..	+ 20
	29	..	—	..	..
	36	..	..	..	+ 20
	66	..	..	..	+ 20
11	13	+	—	..	+ 2
	19	..	..	..	+ 80
	22	..	+	..	..
12	6	+	..	+	—
	17	..	..	..	+ 20
13	8	+	+	..	—
	19	..	..	..	+ 20
14	12	+	..	..	± 2
	19	..	..	..	+ 80
15	5	+	..	..	..
	29	..	..	..	+ 20
16	10	+	..	..	—
	15	+ (spleen)	..	..	? slight atypical
17	5	+	..	..	..
18	3	+	..	..	..
19	5	+	..	..	..
20	5	+	..	..	..
	18	..	..	..	± 8
21	15	..	..	..	+ 20
22	7	+	..	..	..

The Infecting Agent of "Q" Fever, a Rickettsia.—Culture on various media of the blood of human patients and of the blood and spleen of many guinea-pigs failed to grow any significant organism. Nor could one be seen in stained smears of guinea-pig organs known to be highly infectious. This made it likely that the cause of the disease was a virus. Filtration experiments were undertaken with inconclusive results. At this stage infected guinea-pig liver was sent to Dr. F. M. Burnet of Melbourne, who has, among other things, inoculated mice, white rats, monkeys and developing eggs.

The mice work has proved extremely fruitful in his hands. Young mice inoculated intraperitoneally with "Q" fever material show a characteristic picture when they are killed seven to ten days later. The spleen is enlarged, often greatly so, and appears tense and a uniform deep red in colour. Smears from the cut surface, suitably stained, show the presence of intracellular bodies of a rickettsial nature.

The rickettsiæ take the form of tiny rods less than 1μ in length and about 0.3μ across or of coccoid forms indistinguishable from psittacosis. They are grouped in round or oval colonies within the cytoplasm of the cells, and are usually packed so closely that the individual bodies are hardly distinguishable. The colonies vary in size from about 3μ to 12μ.

The rickettsial bodies stain a reddish purple with Giemsa, and in smears from heavily infected spleens they are readily recognisable. With Castaneda's stain most of the bodies appear blue, though in many clumps a proportion are pink.

In the mouse spleen it is the pulp cells where rickettsial colonies are found; they are never found in the Malphigian nodules. Their distribution in the pulp is very irregular. infected cells may also be found in the liver of an infected mouse. They are always interstitial cells, presumably Kupfer cells.

The Transmission of "Q" Fever.—Despite much work the method of natural transmission of the disease has not yet been elucidated.

Attempts have been made to infect guinea-pigs by ingestion, by instillation into the eye, by application to unbroken and to lightly scratched skin. None of these methods has proved clearly successful or in any way comparable to injection for effective transmission. This fact, together with the abundance of virus in the blood, makes it likely that some blood-sucking arthropod is the vector, and that there is a reservoir of infection in some animal.

With meat-workers it is not necessary to postulate a vector. With them it is conceivable that the virus gains entrance through cuts directly from blood or viscera of affected animals.

An animal reservoir has not yet been found. Blood, liver and spleen from a large series of bullocks, sheep, pigs and rats have been injected into guinea-pigs without infecting them. Rats which were under suspicion for a time, may be excluded as a cause of the recent outbreak of "Q" fever at the abattoir. After two cases had occurred there in May, 1936, a very intense campaign against the rats was undertaken, so that since then a rat has hardly ever been seen within the works (although on the river bank near by they may be seen). Rats therefore cannot be held responsible for the present series of cases.

A search has also begun for the vector, but up to the present with negative results.

Relation of "Q" Fever to the Typhus Group.—It has not yet been possible to correlate "Q" fever with any described human or animal disease.

Its rickettsial origin invites comparison with the other rickettsial diseases of man. These fall mainly into three great divisions:

(1) Classical and endemic typhus, transmitted by lice and rat fleas.
(2) *Tsutsugamushi*—scrub typhus group, transmitted by mites.
(3) Spotted fever group, transmitted by ticks.

Murine or endemic typhus occurs occasionally in Brisbane and other Queensland cities. It somewhat resembles "Q" fever in the type of onset, the severe headache and the rapid defervescence. On the other hand, "Q" fever shows as a rule a rather shorter course, there is with it no characteristic rash and there is never any Weil-Felix reaction (*Proteus* OX 19). "Q" fever guinea-pigs do not show scrotal swelling.

A fever of the *Tsutsugamushi* type occurs frequently in North Queensland. It has not been recognized in the southern parts of the State. "Q" fever differs from this by the greater susceptibility of the guinea-pig to "Q" fever as well as by the absence of rash and Weil-Felix reaction (*Proteus* OXK).

It is clear that "Q" fever does not correspond with the type form of any of these three main divisions. There occur, however, in certain countries local types of rickettsial infection not yet adequately classified. A possible relation to these must await the carrying out of cross-immunity tests.

Comparison of "Q" Fever and Heartwater.—Heartwater is an acute infectious disease endemic in many parts of Africa. It is caused by a rickettsia—*R. ruminantium.* It affects goats and sheep particularly, and less severely, cattle. Some types of sheep are naturally more or less immune. Susceptible sheep have a high mortality.

As with other rickettsiases there is an acarine vector. This is, in the southern half of Africa, the bont tick, *Amblyomma hebrœum,* and in Central Africa an allied form, *Amblyomma variegatum.*

The establishment of "Q" fever as a rickettsial disease calls for a critical examination of a possible relation with heartwater.

There is no record of the occurrence of heartwater in Australia. As an outbreak in a flock of sheep may cause the death of 50 to 80 per cent., the disease is one which, if present, could not be overlooked. Neither of the vector ticks is known to exist in Australia, although at least eight other species of the genus *Amblyomma* are indigenous here.

Heartwater is commoner in summer than in winter. There is no obvious seasonal incidence with "Q" fever.

The rickettsiæ of heartwater are always round in shape (Cowdry, Jour. Exp. Med. 1926, 44, 803); those of "Q" fever mostly rod shaped.

The virus of heartwater is easily destroyed. In blood it does not generally survive 24 hours. (Alexander, Vet. Bull., May, 1932, 292). It is rapidly destroyed by 5 per cent. glycerol (Speull in Wallis Hoare's System of Veterinary Medicine, 1, 1265). On the other hand "Q" fever virus is much hardier. Blood specimens have remained quite virulent for two and four days, much of the time at room temperature. Liver emulsions have remained active for a least a month at 5 deg., C., and have survived 50 per cent. glycerol for 16 days or longer.

With heartwater rabbits usually, and guinea-pigs sometimes, show a febrile reaction. (Balozet, Vet. Bull., Nov. 1936, 809.) Our experience with "Q" fever is that guinea-pigs are practically always susceptible and rabbits never.

The immunity conferred on a sheep (if it survives) by an attack of heartwater appears to be much feebler than the immunity of a guinea-pig after an attack of "Q" fever.

As far as the established facts allow a conclusion, it would appear that "Q" fever has no relation to the heartwater of Africa.

REPORT OF ACTIVITIES OF THE MOBILE UNIT.

The Mobile Unit attached to the Laboratory of Pathology and Microbiology, consists of a medical officer and a bacteriologist. This staff was appointed in January, 1937, so that this report covers a period of five months only. However, this short period was sufficient to demonstrate the utility of the scheme, which makes it possible to extend laboratory facilities for the investigation of disease in outlying areas.

The first task of the Mobile Unit was the selection of suitable apparatus. In this connection, due regard was paid to the fact that all equipment would eventually be packed in boxes and to the fact that many parts of the State are not served by gas or electricity. Consequently, the apparatus selected was compact and portable, and the incubator and autoclave are oil burning. As many articles as possible were purchased locally, but much could only be procured from Europe. Some of this has not yet arrived, but when the equipment is assembled, it is anticipated that it will be adequate for the laboratory investigation of all of the common diseases in any part of Queensland. Further additions to equipment may be made from time to time, but the main items have already been purchased, and the unusual expenditure of this year will not be repeated.

In planning the report of the Mobile Unit, it has been found impossible to separate field work and laboratory work. These two phases of activity are sometimes distinct, but more often they merge and overlap. Material collected in the field is invariably subjected to more exhaustive examination in the laboratory. Consequently, it was thought advisable to summarise the results of the investigations to date, without discriminating between field and laboratory work.

Some aspects of this report call for further considation. It will be noticed that under the heading of leptospirosis is included work commenced in 1936. This work was carried out by the Director and laboratory staff last year. As it was found impossible, owing to pressure of routine work, to do justice to both leptospirosis and "Q" fever, it was decided that in 1937 all leptospiral work should be taken over by the Mobile Unit. Thus in 1937, investigations that were incomplete last year have been completed, and new aspects of the leptospirosis problem have been opened up. In order to avoid repetition and to preserve a logical sequence, it has been decided to incorporate all leptospirosis work, whether done in 1936 or 1937, in the report of the Mobile Unit.

It must also be remembered that the Mobile Unit is a part of the laboratory staff, and shares in its work from time to time.

The activities of the Mobile Unit in 1937 are outlined below.

Maintenance of Leptospiral Cultures.—Until recently it was assumed that all cases of leptospirosis were caused by one organism, *Leptospira icterohæmorrhagiæ.* However, it was gradually realised that serologically different types of leptospiræ exist and that not all cases of leptospirosis could be diagnosed by testing the serum against the classical strain.

The occurrence of mild cases of Weil's disease amongst the canecutters of North Queensland led Sir Raphael Cilento to the conclusion that *Leptospira icterohæmorrhagiæ* was not the only causal organism. It has since been proved that at least two types of leptospiræ cause infection in canecutters of the North, and only one of these types is related to *Leptospira icterohæmorrhagiæ.* The discovery in 1936 of a mild type of leptospirosis in Southern Queensland made it necessary to obtain various leptospiral cultures from overseas, in order that they might be compared with Australian strains.

Through the courtesy of Dr. W. K. Mertens, Batavia, of Dr. W. A. P. Schüffner, Amsterdam, and Dr. G. F. Lumley, Townsville, this laboratory has now acquired a comprehensive range of Australian and overseas types of leptospiræ. In addition, the Southern Queensland (Pomona) strain and three Brisbane strains have been added.

At present the total number of leptospiral cultures kept in stock is seventeen, and comprises six strains isolated in Australia, four European strains, one Japanese strain, one Indian strain, and five strains from the Dutch East Indies. This is practically a complete range of leptospiral types. By utilising these strains in diagnosis, no cases are likely to be overlooked. Furthermore, the typing of Australian strains is possible.

The maintenance of these strains in culture is necessarily time consuming, and demands constant watchfulness.

The Incidence of Weil's Disease in Brisbane.—During January and February of this year the occurrence of two cases of Weils disease in Brisbane led to a survey of the problem. One further case was discovered, and a number of rats were examined for carriers. These results were reported in the Medical Journal of Australia on 29th May, 1937.

(*Summary of article by D. W. Johnson, H. E. Brown, and E. H. Derrick—Medical Journal of Australia.*)

In August, 1935, a sewer worker developed an illness, of which jaundice was a feature. The clinical diagnosis was Weil's disease, but all investigations made by the laboratory gave negative result. At this time, only one leptospiral culture was kept at this laboratory.

In 1936, however, a wide range of leptospiral cultures of various types, with their anti-sera, was forwarded to this laboratory by Dr. W. K. Mertens, of Batavia. A South Queensland leptospiral culture (Pomona) was exchanged for a North Queensland culture (Ballico) with Dr. Lumley, Commonwealth Health Laboratory, Townsville.

During 1936 eighty-five rats were examined for evidence of leptospirosis in this laboratory, and two were found to be carriers. The two strains were obtained in pure culture, and, later, were found to be identical with *Leptospira icterohæmorrhagiæ* of classic Weil's disease type.

In January, 1937, a patient who had left North Queensland six days previously became ill with jaundice, and eventually died. His serum agglutinated the leptospiræ of classic Weil's disease in a diagnostic titre.

Serum was then obtained from the patient who had been ill in 1935. Although seventeen months had elapsed, the serum still agglutinated leptospiræ of classic Weil's disease and the leptospiræ of the two Brisbane rat strains, in a diagnostic titre. It was thus established that Weil's disease existed in Brisbane.

Final proof of the existence of Weil's disease in Brisbane was forthcoming in February, 1937, when another sewer worker became ill. Leptospiræ were cultivated from his blood, and were detected in his urine. Serum agglutination tests with the leptospiræ of classic Weil's disease gave strongly positive results.

A series of sewer rats, caught in the locality of the suspected sewer, was forwarded to this laboratory by the Brisbane City Council in March, 1937. Of one hundred rats examined, six were found to harbour leptospiræ in their kidneys. This investigation reveals that the carrier rate of Brisbane rats is low, when compared with that of other cities of the world.

This is the first time that cases of classic Weil's disease have been recorded in Australia. The presence of *Leptospira icterohæmorrhagiæ* in Brisbane sewer rats, and the accompanying liability of sewer workers to become infected, brings Brisbane into line in this respect with European cities.

Discovery of Leptospirosis of a Mild Type in South Queensland.

In July, 1936, a sample of blood was received from Dr. Clayton, of Pomona, for routine fever diagnosis. Agglutination tests with the serum were negative. The clot was ground up and injected into a guinea-pig. This guinea-pig developed a fever which was later proved to be due to a leptospiral infection.

Passage of the leptospira from guinea-pig to guinea-pig was maintained for eleven generations. Its virulence was low compared with that of a North Queensland strain—only two of twenty-two guinea-pigs dying, as a result of infection with it. The guinea-pigs developed a fever of one to five days duration. Most of them lost weight during the illness.

Infected guinea-pigs showed at necropsy numerous hæmorrhages in the lungs and occasionally in the retroperitoneal tissues. There were small yellowish points in the liver. The spleen was slightly enlarged. Jaundice was present in the two fatal cases, but not in the others. Leptospiræ could usually be found in the liver by dark-ground examination, but were scanty in numbers. Even in the fatal cases they were by no means numerous.

About a week after the guinea-pigs' temperature became normal, leptospiræ appeared in the urine. In some cases they were present in enormous numbers. They might persist in the urine for three months or more.

Two wild rats were inoculated. They became symptomless carriers. Rabbits were susceptible, showing a short fever and excreting leptospira in the urine thereafter. Four inoculated white mice did not become infected.

The leptospira was successfully cultivated in Fletcher's and Schüffner's media.

Since the outbreak at Ingham in 1933 attention, as far as leptospirosis is concerned, has been focussed on the strip of country from Ingham to Cairns. It was a surprise to many to find leptospirosis in South Queensland. The reason it had not previously been observed appears to be that the type of leptospira present in South Queensland produces only a mild fever never complicated with jaundice.

Dr. Clayton's patient was a dairy farmer, aged twenty-seven. He fell ill on 19th July with severe frontal headache, feverishness, nausea, and a little vomiting, loss of energy, anorexia and constipation. There were pains in the back, shoulder muscles, and legs.

On examination on 22nd July, the patient looked tired and drowsy. The tongue was furred and the breath heavy. There was congestion of the eyes and photophobia. The temperature was 40 deg. C. (104 deg. F.). It continued high, varying between 38·3 deg. C. (101 deg. F.) in the mornings and 40 deg. C. (104 deg. F.) in the afternoons, until it ceased abruptly on 27th July. The fever was therefore of eight days' duration. The pulse rate was comparatively slow—90 to 100 beats per minute. There was tenderness in the epigastrium. The urine was of the usual febrile type. There was no rash, no jaundice, no enlargement of liver or spleen.

The course of the disease did not vary until 27th July, when all symptoms abated. Appetite returned within three to four days. He was in bed for about fourteen days altogether. The illness left him very weak, and he felt tired and languid for some time, with bouts of headache and constipation. He did not regain his usual health for about one month after the illness was over. Recovery was then absolute.

As this patient's illness was of a mild nature and not complicated by jaundice, it was resolved to attempt to classify the causal leptospira with other Australian and overseas strains.

Preliminary investigations seemed to indicate that the Pomona strain was allied to the Rachmat type of leptospira. This Rachmat leptospira was isolated by Baerman in Sumatra in 1923, from a coolie (Rachmat) suffering from a fever of short duration—an illness clinically similar to that of the Pomona patient.

Investigations in 1937 have tended to confirm this view, and the final classification of the Pomona strain will be published in the *Medical Journal of Australia*.

It appeared that this mild leptospirosis was a not uncommon cause of illness in Southern Queensland. Previously it had been diagnosed as "coastal fever," influenza, or dengue. Confirmation of this view was forthcoming in an epidemic which occurred at Beaudesert late in March, 1937. Heavy rain had fallen earlier in the month, and cases of fever began to appear. It is estimated that twenty patients were in hospital within a week. All were suffering from a similar type of illness, and all resided on farms outside the town.

A visit was made to Beaudesert on 9th April, as soon as information reached the laboratory. All except one patient had been discharged from hospital. With the co-operation of the medical practitioners blood was obtained from seven suspects. The serum of every patient gave positive agglutinations against the Pomona leptospira, some in a dilution of 1/30,000. With the other strains of leptospiræ the reaction was not nearly so marked, and agglutination tests for other organisms were consistently negative. This proves beyond all doubt that the Beaudesert outbreak was caused by the Pomona leptospira.

It was decided, therefore, to attack the epidemiology of the disease. To do this, it was necessary to establish the existence of mild leptospirosis in other countries, and to attempt to locate the carrier animal. With this in mind, the Mobile Unit visited the North Coast area in May. The towns of Caboolture, Maleny, Pomona, Cooroy, Eumundi, Nambour, and Palmwoods were visited. Practitioners were interviewed, and their co-operation solicited. The nature of the disease and the importance of establishing it as an entity, were stressed. It was particularly desired to obtain blood from suspected cases (whether old or recent). Unfortunately, the response has been disappointing, and few bloods have yet arrived for testing. Apparently the practitioners prefer to await the occurrence of fresh cases and are not so much concerned with old cases of undiagnosed fever. Evidence was obtained, however, which indicated that leptospirosis was not uncommon on the North Coast.

Search for the Carrier of Leptospirosis.—The proved cases have occurred in dairying districts where the rat population is supposedly small. In Japan, field mice, *Microtus montebelloi* and *Apodemus speciosis,* can be carriers of *L. hebdomadis* (*Akiyama B*) and *L. autumnalis* (*Akiyama A*) respectively, both of which cause a mild illness in man. To date, it has been possible to examine only ten wild mice, but these gave negative results.

The possibility of cattle or pigs in dairying districts acting as carriers remains to be investigated. The kidneys of twenty cattle of mixed stock have been examined for leptospiræ without result. This aspect of the problem will receive further attention.

The most probable carrier is the rat. Traps were distributed to farmers in the Pomona district, but rats appear only sporadically, and no rats have been received at this laboratory. The problem of securing live rats is a difficult one, but it is hoped that sufficient will ultimately be obtained to prove or disprove the role of the rat as a carrier of leptospiræ of Pomona type.

Survival of Leptospiræ in Water.—Pathogenic lepstospiræ survive longest in an alkaline medium. It was decided to test the alkalinity or acidity of the waters in the Kin Kin district, near Pomona, where a case occurred in 1936. This district is well watered by numerous streams, which ultimately form two main creeks, Skyring's Creek and Kin Kin Creek.

In May, 1937, over forty samples of water were tested for pH over a wide tract of country. In clear water and mining water the pH varied from 6·9 to 7·2, whilst in stagnant turbid water the pH was invariably on the acid side.

A sample of Kin Kin water was brought back to this laboratory and analysed by the Government Analyst, who reported as follows:—

Total Solids .. .. = 44 grams per gallon.
Chlorine—calculated as Sodium Chloride .. .. = 35·8 grams per gallon
Alkalinity—calculated as Calcium Carbonate .. .. .. = 2·8 grams per gallon
Sulphates—calculated as Calcium Sulphate . .. . = 4·6 grams per gallon
Hardness (degrees Clark) .. .. = 23 per cent.
Hardness (degrees German) .. .. = 18·4 per cent.

The water was cultured for leptospiræ by Hindle's coprozoic method with negative results.

As an experiment to test the survival of pathogenic leptospiræ, two drops of a Pomona leptospiral culture were placed in 5 cc. of Kin Kin water which had been boiled. The water was kept at room temperature (range 42 deg. F. to 75 deg. F.) and examined under the dark-ground microscope every three days. Active leptospiræ were seen up to the thirty-third day but not thereafter. Subculture on the thirty-sixth day was unsuccessful.

It thus appears that pathogenic leptospiræ can survive for about a month in this water. The pH of the sample of water at the end of this period has fallen to 6·2. If we assume that death was due either to the gradual increase in acidity of the water or to the disappearance of suitable nutriment, we may anticipate that in the natural running water leptospiræ would survive for a much longer period, as neither of the above factors would arise. This experiment is regarded as being of considerable importance in throwing light on the epidemiology of leptospirosis.

Epidemic Jaundice in Queensland.

Attention was directed to an observed occasional incidence of epidemic jaundice by an outbreak at Jacob's Well and Woongoolba. A visit was made to these settlements on 1st April, and material collected. Since then cases have occurred in Brisbane and at Palmwoods, and data have been collected from sixteen cases.

The illness in all patients is similar, and is non-fatal. After a period of one to four days, during which the patient is feverish and has considerable malaise and digestive upset, jaundice appears. As this increases in intensity, all symptoms disappear. The duration of the jaundice is one to four weeks.

The view tentatively held that the condition is infectious (in one instance five cases occurred in one house), with an incubation period of about fourteen days, appears sound.

Fæces, serum blood, and urine from these patients have been subjected to investigation, but no definite etiological agent has been established. The cause is either a virus or a group of causes (*e.g.*, toxins of various kinds). Investigation is hampered by the lack of a susceptible animal.

It is proposed to collect details of further cases as they arise, because this interesting disease appears to be not uncommon in Southern Queensland.

Dermatitis of Shearers in Western Queensland.

On 29th May a visit was made to Barcaldine, in Western Queensland, to investigate a skin complaint in two shearers. Because of the urgency, and the inaccessibility of the town, the journey was made by air, as also was the return trip on 4th June.

In October, 1935, a shearer developed a pustular rash of both forearms. He subsequently developed a generalised vesicular eruption, diagnosed as pemphigus, and died. The death of this patient caused considerable uneasiness amongst the shearers of Western Queensland, and various factors (e.g., arsenic in the wool) were blamed.

When, in May, 1937, it became known that two shearers were in Barcaldine Hospital suffering from pustular dermatitis on both forearms, it was decided to investigate the matter. Both patients were the only shearers at a small shed, and had shorn ''weaners'' only. The sheep had not been treated with any arsenical preparation.

Clinically, the patients suffered from a pustular dermatitis more marked on the left forearms. The eruption had ulcerated in some areas forming exudative ulcers. Both had a mild febrile reaction. The condition responded rapidly to local treatment, and had almost disappeared in two weeks. Smears taken from the unruptured pustules grew *Staphylococcus aureus,* and no growth was obtained on fungus medium.

Accompanied by the District Inspector of Stock, Longreach, a visit was made to the station where the patients had been employed. The shorn sheep had been yarded for inspection. The sheep on this holding were suffering from two septic conditions. One of these was ''fly-strike,'' which affected sheep of all ages, and the other was a condition known as infectious labial dermatitis, or ''scabby mouth,'' which affected the ''weaners'' only.

It seemed reasonable to suspect the ''scabby mouth'' as having transmitted the condition to the human patients; because, whilst fly strike was common throughout the district and had not been associated with dermatitis, ''scabby mouth'' was rare. Furthermore, it was discovered that the patient who died in 1935 had been shearing sheep affected with ''scabby mouth.''

Smears were cultured from lesions caused by fly strike. These grew a variety of organisms —but not *Staphylococcus aureus.*

Smears and biopsy material were taken from sheep affected with ''scabby mouth.'' Amongst other organisms cultured were *Staphylococcus aureus* and *Staphylococcus citreus.* A fungus was also cultured which was non-pathogenic and was not seen in stained sections of tissue. The *Staphylococcus aureus* cultured was apparently identical in every way with the strains of *Staphylococcus aureus* isolated from human lesions.

Through the courtesy of Professor H. R. Seddon, it was learned that infectious labial dermatitis of sheep was a virus infection. The virus can survive in the crusts from the lesions for long periods. Some injury of the mouth (e.g., lesions caused by irritant weeds or coarse grass) appears to be necessary before virus infection can occur, hence the disease is commoner in young sheep. The histology of the lesions in the affected flock was similar to that described by Professor Seddon in 1928.

It thus appears reasonable to assume that these two patients suffered skin damage, particularly on the left forearm, caused by burr in the fleeces, and that *Staphylococcus aureus,* from sheep affected with "scabby mouth," set up a pustular dermatitis. The question of transference of virus from sheep to human beings is an interesting one. Can the virus of sheep cause human lesions, and, if so, are the lesions related to pemphigus? These questions still remain unsettled, but should be kept in mind should any further cases occur amongst Western shearers.

OTHER ASPECTS OF LABORATORY WORK.

Several phases of the laboratory work of the Mobile Unit deserves further mention.

For instance, the acquisition of leptospiral cultures has led to a great increase in leptospiral tests. Thus the number of leptospiral agglutination tests performed increased from 5 in 1935-36 to 236 in 1936-37. The number of tests performed on rabbit anti-serum has correspondingly increased.

"O" strains of *Proteus* X 19 and *Proteus* XK have been acquired and are used in routine diagnostic tests.

During the year, two samples of cat-gut used for surgical purposes were examined for the presence of tetanus bacilli. One of these samples was associated with a fatal case of surgical tetanus last year. After prolonged incubation, both ærobic and anærobic, the absence of *Clostridium tetani* from both samples was established.

Entomology and parasitology have also received consideration this year. In the search for an insect vector of "Q" fever, the assistance of a member of the staff who is trained in entomology has been of the greatest assistance to the laboratory. Furthermore, through this member, it is hoped to increase the activities of the laboratory in helminthology.

In addition, a commencement has been made on the typing of diphtheria cultures. The classification of Queensland strains into the three main types—*gravis, mitis,* and *intermedius*—has never been attempted before. This work will continue throughout the year, as time permits.

RAT-BITE FEVER.

In the course of the investigation of rat-borne disease by inoculation of rat organs into guinea-pigs, one inoculated guinea-pig developed rat-bite fever. The opportunity was taken to study the disease experimentally, as no such study had previously been made in Australia. The results were reported in the *Medical Journal of Australia,* 1936, ii., 553.

A series of guinea-pigs was infected with rat-bite fever. In them the disease caused more or less continuous fever, inflammation with swelling of the scrotum or vulva, a scaly eruption with alopecia of the face, drooping of the ears, and often a purulent conjunctivitis. In the later stages there was considerable loss of weight, and death usually ensued within about two months.

A rabbit was inoculated with infected guinea-pig's blood. It developed a recurring fever, with paroxysms lasting about one day with varying intervals between. Conjunctivitis developed, and scaly dermatitis of the face. The latter spread till in three months most of the face was scaly and hairless. The rabbit died seven months after inoculation.

The causative organism, *Spirillum minus* or *Spirochæta morsus-muris,* was found in the blood, scrotal serum and conjunctival pus of guinea-pigs and in the blood of inoculated mice. It was most striking when seen with dark-ground illumination, darting rapidly across the field propelled by its posterior flagella. After exposure to strong light for a short time movement became sluggish and finally ceased. The Spirillum could also be demonstrated in stained films of mouse blood.

The rabbit and the guinea-pigs infected with rat-bite fever gave strongly positive Wassermann reactions. Infected mice did not. The Wassermann reaction of one of the two human patients was also positive.

Two of the guinea-pigs were treated with sulpharsphenamine. Each was given five injections of 0·002 to 0·006 gramme. The treatment caused a striking improvement in the temperature, the general condition, the weight, and the local inflammations of face and scrotum. In neither case, however, was the disease cured.

A search was then made for examples of human cases in Queensland, and records of two were obtained. Dr. D. V. Shiel supplied the notes of a boy of seven years of age whom he treated in the Hospital for Sick Children, Brisbane, in 1924, and Dr. T. Leekie, of Ingham, the notes of a boy of four who responded dramatically to two doses of neoarsphenamine. Only three cases had previously been reported in the Australian literature.

Rat-bite fever is not a common disease, but its presence in Brisbane rats shows that human cases are liable to occur from time to time.

Another rat some months later was found by guinea-pig inoculation to have rat-bite fever. The two rats were included in a total of 83 examined; giving the approximate incidence of the disease in Brisbane rats as 2·4 per cent.

LEAD POISONING AND NEPHRITIS.

Physicians practising in Brisbane have been, in the past, familiar with the tragedy of lead poisoning in early childhood with its sequel of chronic nephritis and death some years later. Fortunately, these cases, in their acuter phase, have become much fewer of recent years. The phase of the disease that comes to notice now is usually the late sequel of nephritis.

In most of these cases the decline of health is gradual and the patient has been under the care of a physician for some years before the inevitable death. In the course of the post-mortem work for the coroner we have seen from time to time cases where the slow destruction of the kidney has occurred without giving any symptoms. The young man or woman has appeared well, joining in all the sports and activities of youth, until death has occurred from cerebral hæmorrhage or a sudden cardiac failure.

Certain of these cases are described below. The diagnosis of nephritis was made from the naked eye appearance of the kidneys. The etiological significance of lead was proved by analysis of bone, usually of ribs. The estimations were made by Dr. R. E. Murray, Commonwealth Department of Health, to whom we are grateful. The following table shows briefly the age and sex of the patients and the quantities of lead found.

Patient.	Sex.	Age at Death.	History of Lead Poisoning in Childhood.	Lead in Bones. Mgms per 100 grams of Moist Bone.		Remarks.
				Rib.	Skull.	
D. M. ..	M.	26	..	6 6·8 6·9	.. .. ..	Nephritis, hypertrophy of heart, cerebral hæmorrhage.
R. Y. ..	M.	19	Yes	9·5	..	Nephritis, hypertrophy of heart, cerebral hæmorrhage.
E. H. ..	F.	36	..	5·3	8·8	Nephritis, pontine hæmorrhage.
N. W. ..	F.	20	Yes	5·9 7·5 7·7	.. .. ..	Severe nephritis, renal failure.
L. M. ..	M.	23	..	14	27	Nephritis, accidental death.
G. E. ..	M.	42	..	16·5	..	Nephritis, hypertrophy of heart, cerebral haemorrhage.
W. W. ..	M.	38	..	2·3 2·4	.. ..	Essential hypertension, coronary occlusion, no nephritis.
E. D. ..	M.	19	..	1·4	..	Early hypertension, no nephritis. Accidental death.
Ribs of normal persons in England				0·4 to 1·75		Tompsett, Biochemical Journal, 1936, 30, 345.

D.M. was a male, aged 26. The only serious illness in his childhood was at the age of 3 or 4, diagnosed as "ulcerated stomach," for which he was in hospital two or three weeks. There was no specific history of lead poisoning. His health, since the childhood illness, was good. He went to bed apparently well one night and was found dead in the morning. Autopsy showed small granular kidneys, a hypertrophied heart and cerebral hæmorrhage.

R.Y., male, aged 19, had a definite history of lead poisoning at the age of 4. There was at first footdrop and then paralysis of the lower limbs. After six months' treatment this passed off and ever since he had been quite strong and apparently well. While surfing he was dumped in a breaker. Headache and vomiting developed, he became unconscious and died next day. Post-mortem examination showed small, granular kidneys, a hypertrophied heart and hæmorrhage in the region of the internal capsule of the brain.

E.H., female, aged 36, was of rather simple mentality. There was no history obtainable about her childhood. She died suddenly and was found to have small granular kidneys and hæmorrhage in the pons.

N.W., female, aged 20, was not a coroner's case. She had been under continuous medical supervision since the age of 8, when she was diagnosed as probable lead poisoning. Two others in the family had definite paralysis at the same time and died of nephritis later. Signs of nephritis appeared in N.W. at the age of 11 and steadily progressed till her death. She was thin and underdeveloped. At the post-mortem examination the kidneys were very small, weighing only about 42 grams each.

Another young man, L.M., aged 23, was killed in a street accident. His kidneys were found to be small (2¼ and 2¾ ounces) with a narrow cortex, but not a granular surface. The lead content of his bones was found to be high. No history of his childhood was available. It is possible that his occupation of motor mechanic may have been responsible for his lead absorption.

The opportunity was taken also to examine the lead content of the ribs of a painter, G.E., who died suddenly at the age of 42 from cerebral hæmorrhage. The kidneys showed narrowing of the cortex with a rather granular surface. The heart was greatly hypertrophied (22½ ounces). The lead content of the ribs was greatly increased.

In contrast to these patients who had definite nephritis, lead estimations were made on the bones of two subjects suffering from essential hypertension:—W.W., who died at the age of 38 from coronary occlusion; and E.D., who was killed in the street at the age of 19, and who showed a hypertrophied heart (14¼ ounces) and normal kidneys. In both these cases the figures for lead were normal.

SUICIDE.

Suicide is responsible for about 13 per cent. of the deaths that come under the jurisdiction of the Coroner in Brisbane. In the course of the last two years, since these examinations were undertaken by this Department, 483 post-mortem examinations have been made. Sixty-three of the deaths were due to suicide, forty-four being males, nineteen females.

It is stated that suicide is more common in warm than in cold climates, and, in any one country, commoner in summer than winter. In the following table the numbers of cases are shown for each month. The totals are small, but as far as they go they show no special incidence in the summer in Brisbane.

June	6	Winter 19.
July	6	
August	7	
September	8	Spring 15.
October	4	
November	3	
December	4	Summer 18.
January	9	
February	5	
March	1	Autumn 11.
April	6	
May	4	

The means of self destruction used were as follows:—

—	Male.	Female.	Both Sexes.
Firearms	12	..	12
Hanging	7	3	10
Drowning	6	6	12
Cut Throat	1	1	2
Falls from Height	1	1	2
Run over by Train	1	..	1
Poisons—			
Lysol	4	3	7
Carbon Monoxide	5	1	6
Strychnine	4	1	5
Phenobarbitone	1	2	3
Arsenic Pentoxide	..	1	1
Cattle Dip	1	..	1
Sodium Cyanide	1	..	1
	44	19	63

PUBLIC HEALTH INVESTIGATIONS.

DEPUTY DIRECTOR-GENERAL: JOHN COFFEY, L.R.C.P. & S., L.F.P.S., D.P.H., R.C.P.S.

ACTING CHIEF SANITARY INSPECTOR: S. DUDLEY.

ACTING CHIEF FOOD INSPECTOR: C. M. CATO.

The following is an outline of the work carried out by the inspectorial staff for the year ended June 30th, 1937:—

There is still a steady increase in effective sanitation throughout the State; this appears particularly in sewerage and drainage matters. These advances must be reflected in the better living conditions that these highly essential utilities must give to the communities concerned. The following cities have made substantial progress with their schemes:—Rockhampton, Maryborough, and Townsville.

In Quilpie and Cunnamulla, plans and estimates have been prepared and loans granted, and an early start in construction can be expected.

Southport Town Council has revised plans, and an estimate for the costs of sewering that important seaside resort is now being considered by the Council.

Ipswich City Council has had plans and estimates prepared, and a loan and subsidy have been made available for sewerage works, and an early start in this town is contemplated.

This city has also made a further advance in sanitation by installing a new and up-to-date incinerator for the disposal of garbage. The Council is to be congratulated on the foresight shown in installing this fitment, which will eliminate those unsightly rat breeding eyesores—rubbish dumps.

Local Authority Officers are keenly interested in their work, as is evidenced by the condition of the areas under their control.

Inspectorial work has been carried out by the headquarters' staff as follows:—

Inspections	1,150
Official calls	77
Nuisances	65
Sanitary depôts	19
Refuse tips	20

TOWNS VISITED.

Ayr.—A visit was paid to this town as the result of a request for additional accommodation at the State School.

The matter of the installation of a septic tank was the subject of a report, in which it was recommended that this structure should not be constructed, owing to the danger of pollution of the ground waters.

A recommendation was made to provide one additional E.C. accommodation.

Sarina was visited in regard to drainage matters, and a report containing recommendations was furnished.

Esk.—Following additions to the Hospital and the installation of a new septic tank, a visit was made to advise on the final disposal of the effluent. A report, with recommendations, was made.

Monto.—A visit was made for the purpose of making an inspection of the disposal ground, for the treatment of the drainage. A report, with recommendations, was given.

Wyandra.—In consequence of the proposal to instal a wool scour at this town, a visit was made and the proposed disposal of the wastes investigated. The method proposed was not approved and another site was selected, a report being also made as to ultimate disposal.

Roma.—Repeated complaints were received regarding pollution of Bungil Creek, due, no doubt, to breakdowns of the pumping outfit.

Advice was given to overcome the trouble, and a report made.

Gympie was visited and general inspections were made.

Beaudesert.—Two visits were made to this town: in the first instance, regarding the proposed installation of a septic tank at a hotel: the second visit was in connection with the installation of a septic tank at the hospital. In both instances the propositions could not be entertained, owing to the soil not being of an absorbent nature.

Rockhampton was visited with regard to sewage construction. Matters were fully investigated, and a report, with recommendations, was made.

Mackay was visited, and a general inspection was made.

Gladstone.—Trouble was experienced with the bathing pool, owing to the entrance of oyster spore, which propagated and grew on the sides and bottom of the pool.

Samples of the water were taken and examined, and a report sent to the Local Authority, advising certain structural alterations.

BEACH SANITATION.

The usual visits of inspection were made, prior to the Christmas holidays, to all seaside resorts from the South Coast as far north as Noosa Heads. Where necessary the Local Authorities were notified to effect repairs or construct extra conveniences for the visitors.

It is pleasing to note the advance in this direction at some of the resorts, where pavilions containing dressing rooms, lockers, and sanitary accommodation for each sex are provided, these being of adequate size and, in construction, pleasing to the eye.

HOTEL SANITATION.

The work in this branch is increasing, and the results are beginning to be manifest; where possible, septic tanks are being ordered, and the installation of these much-needed utilities is very much appreciated by the travelling public.

Improvements are being called for at each annual inspection.

Hotels inspected—168.

Objections *reported to Licensing Commission.*

By-laws.—By-laws were perused for the following Local Authorities:—Charleville, Ayr and Quilpie.

Sanitary contracts were perused and amended where necessary:—

Allora, Ayr, Barkly Tableland, Bendemere, Bowen, Bungil, Charleville, Charters Towers, Clifton, Dalby, Eidsvold, Emerald, Laidley, Landsborough, Livingstone, Millmerran, Pittsworth, Quilpie, Rosalie, Stanthorpe, Wambo.

TOWNS AND PLACES VISITED BY HEAD OFFICE STAFF.

Ipswich, Cleveland, Southport, Surfers' Paradise, Burleigh, Palm Beach, Currumbin, Tugun, Coolangatta, Redcliffe, Charleville, Barduthulla, Augathella, Wyandra, Cunnamulla, Eulo, Thargomindah, Toompine, Quilpie, Cheepie, Adavale, Langlo, Condamine, Caloundra, Alexandra Headlands, Maroochydore, Tewantin, Noosa, Beerwah, Biggenden, Childers, Cooran, Cooroy, Cordalba, D'Aguilar, Gunalda, Gundiah, Gayndah, Gympie, Howard, Kilcoy, Landsborough, Maleny, Nambour, Palmwoods, Pialba, Pomona, Tiaro, Torbanlea, Woodford, Woombye, Yandina, Ayr, Mackay, Sarina, Esk, Roma, Beaudesert, Rockhampton, Gladstone.

During the year twenty-four leper patients were met and conveyed to Cleveland, and handed over to the custody of the Superintendent of the Lazaret.

Water samples from the various Local Authorities, Water Authorities, and Government departments were examined chemically and bacteriologically. The numbers submitted were 108 for chemical examination and 127 bacteriologically.

Plague prevention work continues to be carried out on the coastal line of towns. The Local Authorities active in the work are—Brisbane, Ipswich, Gympie, Maryborough, Bundaberg, Mackay, Townsville, and Cairns.

The various Local Authority inspectors throughout the State enforce the provisions of the Plague Prevention Regulations as regards rat-proofing. The number of rodents submitted for examination was 32,382, in addition, 6,001 rats and 1,081 mice were destroyed by the Council.

Provincial Reports.

TOOWOOMBA.—The District Officer in Charge reports as follows:—

Town and Country Inspections—

Number of Inspections	1,236
Number of official calls	101
Total	1,337
Number of nuisances	250
Number of sanitary depôts	33
Number of garbage tips	39
Number of towns visited	28

Number of Miles Travelled—

By train	1,992
By motor-car	556

There has been no serious epidemic of infectious disease within the area of the Local Authorities usually included in the tours of inspection undertaken from this office, and which extends to the City of Warwick, Towns of Dalby and Goondiwindi, and also the following Shires—Balonne, Waggamba, Inglewood, Rosenthal, Glengallan, Stanthorpe, Allora, Clifton, Cambooya, Pittsworth, Drayton, Crow's Nest, Jondaryan, Rosalie, Highfields, Millmerran, Wambo.

City of Toowoomba.—The principal matter receiving attention within the area of the City of Toowoomba is the pollution of Gowrie Creek. In recent years the main source of such pollution was considered to be the unsatisfactory condition of the sewerage purification works at Wetalla, but the present period finds a marked improvement in the maintenance and scientific control of the undertaking in question, so that it can be no longer claimed as the predominating source of the nuisance in the creek. The fact of such pollution arising from other sources was demonstrated in no uncertain manner on a recent occasion, and steps are about to be taken by the City Council to put certain departmental recommendations into effect.

The outstanding success of the Toowoomba mosquito control measures has been maintained throughout the year, and the Council is to be commended on the efficiency of this work, which is undoubtedly more thorough than the average citizen considers possible.

City of Warwick.—In my report for the year ending 30th June, 1936, I stated that the Local Authority was about to give consideration to the provision of the city sewerage system, but the Council has failed to appreciate its obligations in this particular instance, and no advance has been made to date. During the year special attention has been given to the inspection of the existing city drainage facilities at Warwick, and the facts, as subsequently detailed in relevant reports, showed certain possible dangers in the existing street channelling. A deep drainage system is an urgent requirement.

The primary requirements of the Health Acts are receiving due attention within the areas of the respective Local Authorities included in the above category. Councils are still failing to make a more definite scientific attempt to deal with the question of mosquito eradication.

Hotel Sanitation.

Number of hotels inspected	161
Number of objections filed	54
Number of hotels reinspected	43

Licensing Districts Visited.—Toowoomba, Warwick, Stanthorpe, Goondiwindi, St. George, Dalby.

Towns Visited.—Helidon, Warwick, Sandy Creek, Leyburn, Karara, Pratten, Stanthorpe, Wallangarra, Tannymorel, Killarney, Emu Vale, Yangan, Dalby, Goondiwindi, Inglewood, Texas, St. George, Nindigully, Thallon, Talwood, Dirranbandi, Yelarbon, and Mungindi.

There is always a marked improvement in the sanitation facilities at licensed premises subsequent to completion of the respective orders issued from time to time from this office; this improvement would be even more satisfactory if the work in question could be supervised more closely during its progress. This latter supervision could not be undertaken until such time as the staff is augmented or, alternatively, the area allocated to this district curtailed.

ROCKHAMPTON.

The Officer in Charge reports as follows :—I have to submit the following results of work carried out in this district.

Of a total of 107 inspections made in the Central City the majority were in connection with drainage and sanitary conveniences, whilst special attention was paid to complaints received by Local Authorities regarding cafès, as a result of operations of the rat gang on such premises. Particular attention was also paid on several occasions (in company with the Chief Inspector) to campers, stables, and piggeries.

Hotel licensing work received attention, reports having been furnished in connection with 58 premises. In view of the Local Authorities proceeding with the installation of a sewerage scheme for the city, the question of calling upon the owners of licensed premises to provide septic installations has been left in abeyance.

A complaint was received in connection with the accommodation provided for waterside workers at Port Alma.

A report and recommendation was recently submitted to the Rockhampton Harbour Board for adoption. This report was compiled to February, 1937.

The report states that since taking over this District in February the following is the result of the inspector's operations:—

Hotel licensing	122
General inspection	156
Nuisances	39
Piggeries	3
Sanitary depots	1
Official calls	281

Satisfactory progress is being made with the installation of the sewerage scheme.

During the year the acting Chief Sanitary Inspector paid a visit of inspection to the City, and, as a result, the Local Authority was requested to prepare sewerage by-laws so that all work in connection with the scheme might be carried out in an efficient manner. Some street water-channelling has been relaid during the year as funds are available, but there are still other parts in bad condition.

With the advent of sewerage installations, foul wastes will no longer be discharged into these channels and the present nuisances will be eliminated.

The City Inspector was accompanied on inspections of residentials and of other premises in a dilapidated condition and resultant action was taken by the Local Authority.

Hotel inspections made during the year numbered 122, and in 102 improvements consisting mainly of alterations to the premises were requisitioned.

MACKAY.

The Officer in Charge of the district reports as follows:—

The year has been one of steady progress, several new concrete buildings having been erected in Mackay, Proserpine, Bowen, and other places in the area.

The Outer Harbour is still a busy place. The men's food ranch was closed down for a while, but has been reopened.

Mackay sewerage has been completed for about two-thirds of the City and is working well, no nuisances have been created at the outfall, where the effluent is released on the outgoing tide and carried out to sea. Sanitation has been well attended to, all depôts and refuse tips have been inspected and sanitary conveniences in fair condition.

Nuisances where found have been eliminated as far as possible.

Local Inspectors of the various Towns and Shires in this area are carrying out their duties in a very efficient manner.

Country Towns visited are as follows.—Pleystowe, Walkerston, Nebo, Sandy Creek, Sandringham, Grasstree, Hill End, Miclere, Farleigh, Habana, Foulden, St. Lawrence, Dundula, Slade, Glenella, Wandaroo, The Leap, Kuttabul, Mount Pelion, Kolijo, Calen. Pindi Pindi, Yalbaroo, Sarina, Retreat, Eton, Homebush, Koumala, Ilbilbie, Carmila, Marian, Mirani, Gargett, Pinnacle, Finch Hatton, Netherdale, Eungella, Proserpine, Bowen, Merinda. Collinsville.

TOWNSVILLE.

The Officer in Charge of the District reports as follows:—

Routine Inspection work has been carried out in Townsville and immediate district.

Sanitary surveys were made at Mount Isa, Cloncurry, Julia Creek, Richmond, Hughenden, Charters Towers, Ingham, Halifax, and at Magnetic Island, the three townships of Picnic Bay, Nellie Bay, and Arcadia.

Townsville.—The sewerage scheme is now well under way, the institution of which will vastly improve the sanitary circumstances of the city and suburbs. The construction of street water-channelling has been continued throughout the year, and in many localities a decided improvement has resulted. Thirteen and three-quarter miles of channelling have been laid during the year and 2 miles of storm water drains.

Night soil removal and disposal continues to be conducted without complaint.

The removal and disposal of refuse shows an improvement on past years, but a higher standard of efficiency is required.

Drastic action is being taken by the Council in regard to boarding-houses—a very necessary step.

In country towns health matters are gradually improving and the work being done by Councils and their inspectors is creating better and healthier communities.

Many improvements, however, are still necessary, and it is important that a speeding up should take place in certain of these such as pure water, sewerage, drainage, refuse disposal, and mosquito control.

Mount Isa.—The Cloncurry Shire Council was strongly advised to provide sewerage and drainage for the business block of the town.

The improvements in housing at Mount Isa are very slow, many boarding-houses being below a satisfactory standard.

Recommendations were made for the better conduct of the sanitary depôt.

At Cloncurry a special visit was made in connection with administration and a report submitted.

A report and sketch were submitted to the Council relative to the drainage of a cafe and adjacent premises.

An inspection of the general hospital was made and a report submitted.

Julia Creek.—The new sanitary depôt is now in use, and the shed and plant in course of erection.

Improved methods of disposal at the tip are required.

The Railway Department have carried out the construction of an improved cesspit at many of the isolated places along the western line. At Richmond the Council is considering the advisability of a scheme of sewerage for the town. Nightsoil disposal is satisfactory, but disposal methods of refuse require to be improved. The sanitary circumstances at Hughenden were satisfactory, but better disposal of refuse was recommended.

At Charters Towers all hotels were inspected and reports submitted.

Essentials are being well maintained.

Ingham and Halifax.—Improvements at both sanitary depôts were recommended. The refuse tips, especially the one at Ingham, are not well conducted and suggestions were made for betterment in this respect. The insanitary condition of Palm Creek, which runs through the town, still persists.

Ayr, Home Hill, and Brandon.—The water supply of this area is still a cause of anxiety.

The sanitary circumstances of these localities were found to be very fair.

Sanitary depôts were well conducted and controlled; garbage disposal was not up to the same standard; recommendations to correct the defects were made, and arrangements made to have them rectified.

Towns Visited.—Ingham, Mount Isa, Cloncurry, Julia Creek, Richmond, Hughenden, Charters Towers, Ayr, Home Hill, Brandon, Halifax.

Inspection	957
Official calls	106
Nuisances	135
Sanitary depôts	14
Refuse tips	44
Sewerage inspections	30
Drainage inspections	59
Hotel inspections	53

CAIRNS.

The Officer in Charge submitted the following report of work carried out:—

Number of inspections	1,627
Number of official calls	10
Number of nuisances	5
Number of sanitary depôts	13
Number of garbage depôts	6
Number of towns visited	27

The following are the towns visited:—Almaden, Atherton, Babinda, Cardwell, Chillagoe, Croydon, Dimbulah, Einasleigh, El Arish, Forsayth, Garradunga, Georgetown, Innisfail, Kidston, Kuranda, Malanda, Mareeba, Millaa Millaa, Miriwinni, Mount Surprise, Mourilyan, Normanton, Ravenshoe, Silkwood, South Johnstone, Tully, Yungaburra.

Improvements were noticed generally throughout the area in sanitary conditions, the exception being those centres distant from Cairns, where the Local Authorities do not employ an Inspector. The Cairns City Council is still considering the installation of a sewerage scheme.

During the year two special visits were made to Mareeba, the first to report on the existing water supply and the proposed new water supply; and the second to obtain and submit for examination samples of water from both supplies.

HOTEL SANITATION.

During the year licensing inspections have been made at 19 hotels following an instruction to submit a report on hotels in this area with a view to bettering and increasing the accommodation for tourists. Since that time annual reports for the Licensing Commission have been submitted on 24 hotels in the district.

The licensing districts visited for the purpose of making these inspections were:—Cairns, Atherton, Mareeba, Chillagoe, Etheridge, Croydon, Normanton, Innisfail, Herberton.

FOOD AND DRUGS.

During the fiscal year the work of this section has continued upon the usual lines, and has consisted in the enforcement in the Brisbane metropolitan area and throughout the entire State of the provisions of Part VI. of the Health Acts (Food and Drugs), the Food and Drug Regulations, Milksellers' Regulations, Health (Food Supply) Regulations, Fish Supply Regulations, Poisons Regulations, and Footwear Regulations.

INSPECTIONS GENERALLY.

Supervision over the sale and packing of foodstuffs generally has been maintained, and a few of those duties are enumerated below:—

Show Grounds, &c.—Inspections made at the Royal National Association's Exhibition, country shows, and racecourses, and with the mutual co-operation of the various authorities concerned, have resulted in important and necessary improvements for the protection of food being effected. As a result of recent increased attendances at their meetings race clubs have found it necessary to increase accommodation in the direction of liquor bars and tea rooms, and these places of refreshment have been modelled on hygienic lines.

Auction Rooms, &c.—Auction room, King's warehouse, and lost property sales of food and drugs have received regular attention at the hands of the headquarter's staff, with a view to preventing the sale to the public of old and deteriorated articles.

Food Basements.—Inspection of basements used for the preparation and sale of food revealed in some instances the necessity for increased air supply. Where such necessity existed the installation of mechanical ventilation system was insisted upon. The Food and Drug Regulations provide that no person shall use any cellar or basement for the sale of food without first obtaining the permission of the Director-General.

Second-hand Containers.—To secure the proper sterilisation of all second-hand food containers, before their re-use, special investigations were made during the year. Second-hand containers are largely used in the packing of alcoholic liquors, aerated waters, cordials, milk, jam, pickles, sauces, &c., and it was found that the majority of manufacturers were exercising every care to ensure that all containers used were scrupulously clean.

Weights of Food.—As a result of weighing tests conducted by inspectors, it was discovered that honey packed under several different brands was deficient in weight when compared with the net weight declared in the label. Suitable action was taken, resulting in all such misdescribed articles being removed from the market.

MILK.

Work in connection with the control of milk supply generally has proceeded along the usual lines. It is regrettable that the amount of sampling is less than the previous year, but this is due to demands on the officers concerned for their attention to other pressing work.

Bacteriological Samples.—The number of legal samples obtained during the year was 873, and these represented samples of every type of milk supply, including pasteurised milk and milk from a certified dairy.

In the main, samples conformed to the standard. Where they fell below the standard, the necessary advice for the rectification of the fault was given to the milkseller concerned, and it is pleasing to state that the desired result was thus generally effected. Persistent failure to supply "clean" milk earned prosecution for the offenders.

A close check has been kept on pasteurised milk, and the results proved satisfactory.

PROSECUTIONS FOR ADULTERATED MILK (EXCESS BACTERIA) FOR YEAR 1936-37.

Date.	Place.	Micro-organisms per Cubic Centimetre.	Fines.			Costs.		
			£	s.	d.	£	s.	d.
1937—								
6th May	Brisbane	4,452,000	10	0	0	2	2	0
13th May	Brisbane	8,109,000	3	0	0	2	2	0
27th May	Southport	6,084,000	2	12	0	2	8	0
Totals ..	..	..	£15	12	0	£6	12	0

Chemical Samples.—During the year, a total of 2,374 samples of milk were obtained for chemical analysis, and the obtaining of such has necessitated sampling operations in the City of Brisbane and outside centres extending from Nambour in the North Coast, to Coolangatta on the South Coast.

The quality of these milks is fully dealt with in the report of the Government Analyst, but it should be stated that for the major portion of the year severe drought conditions obtained in the south-eastern portion of the State, with a consequent deterioration in the quality of milk produced. There were twenty-two prosecutions for the sale of milk adulterated with water during the past year, and these prosecutions are detailed as follows:—

PROSECUTIONS FOR ADULTERATED MILK (ADDED WATER) FOR YEAR 1936-37 (HEADQUARTERS).

Date.	Place.	Added Water.	Fines.			Costs.		
		Per cent.	£	s.	d.	£	s.	d.
1936—								
20th July	Beenleigh	40·0	20	0	0	1	7	0
20th July	Beenleigh	25·4	20	0	0	1	7	0
27th July	Brisbane	22·7	20	0	0	1	7	0
3rd September	Nambour	31·8	31	0	0	1	7	0
3rd September	Nambour	16·3	16	0	0	1	7	0
26th October	Glamorgan Vale	10·9	10	0	0	2	8	0
26th October	Glamorgan Vale	10·9	10	0	0	2	8	0
23rd November	Brisbane	13·6	13	0	0	1	7	0
1937—								
6th January	Dayboro'	20·0	20	0	0	1	7	0
19th January	Kilcoy	20·0	20	0	0	1	7	0
28th January	Brisbane	9·0	9	0	0	1	7	0
28th January	Brisbane	12·7	12	0	0	1	7	0
28th January	Maryborough	12·7	12	0	0	1	7	0
8th February	Brisbane	10·9	10	0	0	1	7	0
9th February	Brisbane	29·0	20	0	0	1	7	0
1st April	Southport	10·9	11	0	0	1	1	0
9th April	Fernvale	24·5	20	0	0	1	7	0
13th May	Brisbane	6·3	6	0	0	1	7	0
20th May	Brisbane	6·3	6	0	0	1	1	0
28th May	Ipswich	10·9	11	0	0	1	7	0
22nd June	Brisbane	54·5	20	0	0	1	7	0
24th June	Merrimac	9·0	9	0	0	3	9	0
						1	7	0
Totals	..	..	£330	0	0	£33	6	

In addition there was one prosecution for a deficiency in the minimum quantity (3.3 per cent.) of milk-fat required to be present, the vendor being fined £1 13s. and £1 7s. costs.

An unusual prosecution was successfully instituted when a milk-seller was convicted and fined £1 and £2 8s. costs for selling milk adulterated with formalin.

Premises and Vehicles.—Particular attention was paid to the registered premises and vehicles of all milk vendors. In regard to the larger wholesale premises, inspections have been made in conjunction with the Dairying Branch of the Agriculture and Stock Department, and much improvement has been effected. Visits of inspection have been paid to other milk-sellers' premises, and it is pleasing to report that many rooms of approved type have been constructed for the storage of cans and utensils.

During the period under review a pasteurising plant was installed at Southport, and has been found to be kept in a satisfactory condition.

Any serious defects in premises and vehicles have resulted in prosecution of the offenders, and these prosecutions are detailed as follows:—

MISCELLANEOUS PROSECUTIONS AGAINST MILK-SELLERS BY HEADQUARTERS STAFF FOR YEAR 1936-37.

Date.	Place.	Nature of Offence.	Fines.			Costs.		
			£	*s.*	*d.*	£	*s.*	*d.*
1936—								
1st July	Brisbane	Name not displayed on vehicle	1	0	0	0	6	0
1st July	Brisbane	Milk vessels without lids	2	0	0	0	6	0
8th July	Brisbane	Milk vessels without lids	1	0	0	0	6	0
7th September	Brisbane	Waste food carried on vehicle	3	0	0	0	6	0
21st September	Brisbane	Name not displayed on cans	1	0	0	0	6	0
21st September	Brisbane	Use of "dip" measure	1	0	0	0	6	0
30th September	Brisbane	Milk vessels without lids	1	0	0	0	6	0
5th October	Brisbane	Water carried on milk vehicle	2	0	0	0	6	0
7th October	Brisbane	Sale of milk without license	1	0	0	0	6	0
29th October	Brisbane	Use of unregistered premises	3	0	0	..		
29th October	Brisbane	Use of unregistered premises	2	0	0	..		
15th December	Brisbane	Use of unregistered premises	2	0	0	..		
1937—								
6th January	Dayboro'	Sale of milk without license	1	0	0	0	6	0
28th January	Brisbane	Water carried on milk vehicle	1	0	0	0	6	0
28th January	Brisbane	Milk vessels without lids	1	4	0	0	6	0
28th January	Brisbane	Water carried on milk vehicle	1	0	0	0	6	0
28th January	Brisbane	Water carried on milk vehicle	1	0	6	0	6	0
8th March	Brisbane	Use of unregistered premises	2	0	0	0	6	0
1st April	Southport	Sale of milk without license	0	10	0	0	6	0
20th April	Brisbane	Use of unregistered premises	1	0	0	0	6	0
6th May	Brisbane	Use of unregistered premises	1	0	0	..		
6th May	Brisbane	Use of unregistered premises	1	0	0	..		
13th May	Brisbane	Milk vessels without lids	1	0	0	..		
13th May	Brisbane	Use of unregistered premises	1	0	0	..		
26th May	Beenleigh	Obstruction of inspector	1	12	0	2	8	0
22nd June	Brisbane	Water carried on milk vehicle	1	4	0	0	6	0
28th June	Ipswich	Use of dirty vehicle	1	0	0	0	6	0
Totals	..	..	£36	10	6	£8	2	0

ICE-CREAM.

Inspection of premises occupied by manufacturers of ice-cream was carried out, and, as a result, some of the occupiers received statutory notice either to vacate the premises or bring them into structural compliance with the requirements of the Food and Drug Regulations.

Samples of ice-cream were secured for examination from shops and itinerant vendors, and where the sellers had failed to take heed of a previous warning by the Department prosecutions were launched for the sale of ice-cream containing excess bacteria. The majority of the samples submitted to chemical analysis conformed to the prescribed standard for milk-fat content (10 per cent.)

PROSECUTIONS FOR ADULTERATED ICE-CREAM (EXCESS BACTERIA).

Date.	Place.	Micro-organisms per cubic centimetre.	Fines.			Costs.		
			£	*s.*	*d.*	£	*s.*	*d.*
1937—								
3rd June	Brisbane	884,000	1	0	0	2	2	0
3rd June	Brisbane	6,201,000	2	0	0	2	2	0
3rd June	Brisbane	1,802,000	1	0	0	2	2	0
Totals	..	..	£5	0	0	£6	0	0

MARGARINE.

Samples of margarine were obtained for analysis, and these were reported by the Government Analyst as conforming to standard. It was necessary, however, to draw the attention of some manufacturers to the requirement that all pats of margarine must be packed for sale in cube form, and defects in this respect were at once remedied.

BREAD.

Considerable attention was given to the quality of bread during the year, samples of the different types of loaves being examined by the Government Analyst.

A baker at Charleville was convicted of having baked bread of the two pounds denomination which was deficient in its due weight, and the magistrate hearing the case imposed a penalty of £4 16s. and 6s. costs.

MINCED MEAT.

Minced meat being largely used as the food of invalids, the addition of a preservative substance to this article is prohibited by the Food and Drug Regulations. As a result of samples obtained for analysis, three Brisbane butchers appeared in the Summons Court charged with having sold minced meat that was adulterated in that the samples were preserved with sulphur dioxide.

PROSECUTIONS FOR ADULTERATED MINCED MEAT FOR YEAR 1936–37 (HEADQUARTERS).

Date.	Place.	Quantity of Preservatives (Sulphur Dioxide).	Fines.	Costs.
1937—			£ s. d.	£ s. d.
3rd June	Brisbane ..	12·6 grains per lb.	4 0 0	1 1 0
30th June	Brisbane ..	2·2 grains per lb.	3 0 0	1 7 0
30th June	Brisbane ..	2·8 grains per lb.	1 11 0	3 9 0
Totals ..	..	..	£8 11 0	£5 17 0

SPIRITUOUS LIQUORS.

Hotel and club bars and other licensed premises were periodically visited, and the liquors dispensed tested for their alcoholic strength. In addition to a number of warnings issued to licensees where spirits did not conform strictly to standard, seven prosecutions were taken for the sale of falsely described and adulterated liquors, as listed below:—

PROSECUTIONS OF LICENSED VICTUALLERS FOR YEAR 1936–37 (HEADQUARTERS).

Date.	Place.	Offence.	Fines.	Costs.
1936—			£ s. d.	£ s. d.
24th September ..	Quilpie ..	Whisky, adulterated	2 0 0	1 7 0
24th September ..	Quilpie ..	Rum, adulterated	3 0 0	1 7 0
2nd October ..	Goodna ..	Rum, adulterated	4 0 0	1 7 0
13th October ..	Cunnamulla ..	Whisky, adulterated	4 0 0	1 7 0
5th November ..	Scarborough ..	Rum, falsely described	3 0 0	0 6 0
23rd November ..	Brisbane ..	Rum, adulterated	5 0 0	1 7 0
1937—				
2nd February ..	Bundaberg ..	Whisky, adulterated	3 0 0	1 7 0
Totals ..	..	..	£24 0 0	£8 8 0

WINE.

In consequence of the frequently expressed public opinion that cheap wines sold in Queensland were of the "pinkie" type, or that they were adulterated with methylated spirit, a special survey was made during the period under review of all wines sold by merchants and wine saloons. In no case did the Government Analyst report the presence of methylated spirit, or that the wine was not fully matured.

FRUIT DRINKS.

Examination of certain aerated drinks purporting to contain five per cent. fruit juice in conformity with the standard provided by the Food and Drug Regulations showed that they failed in their fruit juice content. An investigation of this matter proved that the discrepancy had occurred as a result of the manufacturers making use of allegedly fruit juice concentrate imported from a Southern State, and which upon analysis was found to be actually fruit juice diluted with added water. The necessary action was taken to ensure the correct labelling of such imported dilutions of fruit juice.

Fruit and Vegetables.

A large overseas shipment of packed figs was found to show signs of inherent vice in the incubation stage. Prompt treatment by means of sterilisation completely checked the trouble, and the fruit was subsequently released for sale.

Three consignments of cabbages from the Cleveland district were found to be contaminated with arsenic. In consequence thereof one of the offending growers appeared in the Summons Court and was convicted. The results of the prosecution of the other farmers were not available at the end of the period under review.

Apples heavily contaminated with arsenate of lead continue to reach the Brisbane market from the South, and this fruit entails much supervision by the Department's officers. It was found necessary to require that 5,694 cases of apples be cleaned of poison before being offered for sale to the public. One firm of agents that neglected to so clean the fruit before sale was proceeded against for a breach of the Food and Drug Regulations, and the penalty obtained is given below.

Prosecutions for Fruit and Vegetables contaminated with Lead and Arsenic for Year 1936–37 (Headquarters).

Date.	Place.	Article.	Fines.	Costs.
			£ s. d.	£ s. d.
1937—				
3rd June ..	Brisbane ..	Apples ..	10 0 0	..
30th June ..	Brisbane ..	Cabbages	10 0 0	0 6 0
Totals ..	..	..	£20 0 0	£0 6 0

Fish.

Regular and systematic supervision over fish supplies at the Fish Market, Brisbane, has been conducted by an inspector and assistant inspector, who have also supervised the sale of fish at retail shops.

As a result of the activities of these officers, 39 tons 2 cwt. 3 qr. 15 lb. of fish, 353 crabs, and 3½ bags of oysters have been condemned and destroyed as unfit for human consumption.

Unsound Food.

As a result of inspection of premises and stocks, officers of the Headquarters Staff have, during the period under review, certified to the destruction of 101 tons 17 cwt. 1 qr. 21 lb. of foodstuffs unfit for human consumption, as per list following:—

Unsound Foods Destroyed by Mutual Arrangement.

Article.	Tons.	cwt.	qr.	lb.
Cheese ..	0	0	3	5
Confectionery	0	1	1	0
Dates ..	16	18	2	0
Essences	0	9	3	0
Fish (Canned)	1	11	3	25
Flour ..	0	0	2	4
Fruit (Fresh) ..	42	9	0	0
Fruit (Preserved)	3	7	0	0
Groceries (Various)	4	7	1	21
Jam ..	0	0	3	23
Jelly Crystals	0	1	0	8
Meats ..	0	0	1	26
Nuts ..	14	1	0	18
Olives ..	0	1	3	8
Skim Milk	0	1	2	24
Sugar (Icing) ..	0	0	1	20
Vegetables (Fresh)	18	3	2	5
Total	101	17	1	21

Sampling.

Chemical.—A total of 3,824 samples of food, drugs, and poisons were obtained and submitted to the Government Analyst, summarised as follows:—Beverages, bread, condiments, cordials, crayons, disinfectants, drugs and medicines, essences, fish (canned), fish (cured), flour, fruit, jelly crystals, meat, milk (fresh), milk preparations, oil, paint, soap, spirituous liquors, tobacco and tobacco leaf, toilet preparations, toys, vegetables, and vinegar.

Bacteriological.—Samples submitted for bacteriological examination totalled 83, and included bread, cheese, disinfectant, fly-spray, ice-cream, milk, oil, and oysters.

MISCELLANEOUS PROSECUTIONS OF FOOD VENDORS FOR YEAR 1936-37 (HEADQUARTERS).

Date.	Place.	Nature of Offence.	Fines.	Costs.
			£ s. d.	£ s. d.
1936— 5th August ..	Brisbane	Name not displayed on vehicle	2 0 0	0 6 0
1937— 25th February ..	Brisbane	Name not displayed on vehicle	1 0 0	0 6 0
25th February ..	Brisbane	Food exposed to contamination	1 8 0	0 6 0
31st March ..	Brisbane	Ice exposed to contamination	0 5 0	0 6 0
17th June	Wynnum	Food exposed to contamination	1 0 0	0 6 0
Totals ..	..	..	£5 13 0	£1 10 0

SOAP.

The composition and labelling of soap received attention, and, as a result, certain lines not correctly labelled were dealt with in a satisfactory manner by the manufacturers concerned. In one case a large quantity of soap was found not to conform to the legal standard in that it was deficient in the proportion of fatty acids required to be present, and subsequent action resulted in this being promptly removed from the market.

LEAD PAINT ON VERANDAH RAILING.

The Health Acts prohibit the use on any verandah railing, gate, or fence, of paint which contains more than 5 per cent. of soluble lead. During the year one painter was prosecuted for a breach of this provision and was fined £2 4s. and 6s. costs.

TOBACCO.

Tobacco leaf contaminated with arsenate of lead constitutes an adulterated article under the provisions of the Health Acts, and as such may be seized and destroyed. In consequence of this fact, growers of tobacco continue to exercise care in the use of poisonous insecticides generally.

One thousand seven hundred and twenty-seven samples of leaf forwarded for sale in Brisbane were secured by the headquarters staff and submitted to the Government Analyst. Where traces of poison were found to exist the grower concerned was advised accordingly and warned of the necessity of exercising greater care in the application of the poison to the grown plant.

POISONS.

Supervision over the packing, sale and use of poisons has been maintained by the enforcement of "The Poisons Regulations of 1924." Amendments to these Regulations during the year included the listing of amidopyrine as a restricted drug, the addition of crayons and pastels containing lead or arsenic to the list of scheduled poisons, together with a new regulation providing for the use of arsenical preparations that are homogeneous in the dipping and jetting of sheep.

The matter of storage and dispensing of poisons at hospitals, and the keeping of proper and complete records at such institutions of restricted and dangerous drugs, has been taken in hand. As a result of visits by officers of this Department, several hospitals promptly altered their method of control over such drugs and inaugurated an efficient record system. In one instance, as a result of an investigation by this Department, a pharmaceutical chemist was later appointed to take charge of drugs at a district hospital.

In the sale of Schedule No. I. (first part) poisons it is necessary that the seller know the purchaser or that the sale be made in the presence of a third person known to both the seller and the purchaser, and the sale duly recorded. In this regard, a prosecution against a pharmaceutical chemist was launched for having sold chlorodyne to a person unknown to him, and also with having failed to record the sale and secure the signature of the purchaser. These cases were not finalised at the end of the period under review.

Prosecutions successfully taken for breaches of the poisons law are as follows:—

Poisons Prosecutions for Year 1936–37 (Headquarters).

Date.	Place.	Offence.	Fines.	Costs.
			£ s. d.	£ s. d.
1937—				
26th January ..	Gympie	Illegal possession of a dangerous drug ..	50 0 0	5 19 0
26th January ..	Gympie	Sale of poison without license	25 0 0	0 6 0
26th January ..	Gympie	Poison packed in a food container (beer bottle)	10 0 0	0 6 0
25th February ..	Brisbane	Dwelling so treated with poisonous insecticide as to be dangerous	2 4 0	0 6 0
Totals ..	..	..	£87 4 0	£6 17 0

Country Towns Visited.

In addition to their duties in the City of Brisbane, visits of inspection have been paid by officers of the Headquarters Staff to the following places:—

Adavale, Aratula, Augathella, Bardulthulla, Beaudesert, Beenleigh, Beerwah, Biggenden, Birkdale, Blackbutt, Boonah, Booval, Bundaberg, Bundamba, Burleigh Heads, Caboolture, Caloundra, Charleville, Cheepie, Childers, Chinchilla, Cleveland, Coolangatta, Cooran, Cooroy, Condamine, Cordalba, Cunnamulla, Currumbin, D'Aguilar, Dallarnil, Dayboro, Eulo, Eumundi, Fairney View, Fernvale, Gayndah, Glamorgan Vale, Goodna, Goomeri, Gunalda, Gundiah, Gympie, Harrisville, Howard, Ipswich, Kalbar, Kilcoy, Kilkivan, Kingaroy, Kumbia, Landsborough, Langlo, Loganholme, Maleny, Maroochydore, Maryborough, Merrimac, Miles, Mooloolah, Mount Alford, Murgon, Nambour, Nanango, Nerang, Palmwoods, Peak Crossing, Petrie, Pialba, Pomona, Proston, Quilpie, Redcliffe, Roadvale, Rosewood, Samford, Somerset, Southport, Tiaro, Tewantin, Thargomindah, Tingoora, Toompine, Torbanlea, Tugun, Villeneuve, Warril View, Wondai, Woodford, Woombye, Wyandra, Yandina, Yatala, Yarraman.

Toowoomba.

The inspector stationed at Toowoomba reports that the requirements of Part VI. of the Health Acts have been, in the main, reasonably complied with, both in the City of Toowoomba and the country centres of his district.

During the year under review, the following outside places were visited:—

Mungindi, Yelarbon, Dirranbandi, Talwood, Thallon, Nindi Gully, St. George, Texas, Inglewood, Goondiwindi, Dalby, Yangan, Emu Vale, Killarney, Tannymorel, Glen Aplin, Ballandean, Wallangarra, Stanthorpe, Pratten, Karara, Leyburn, Sandy Creek, Warwick, Helidon, and Crow's Nest.

Strict supervision has been maintained over the milk supply, resulting in 157 official samples of milk being procured for analysis. The Government Analyst reported that six of these samples were adulterated by the addition of water, and a further thirty-eight failed to conform to the prescribed standard for milk in that they were deficient in milk fat.

Legal proceedings were instituted against four milk vendors for having sold adulterated milk. For details, see accompanying list.

Suppliers of milk found deficient in milk-fat were advised to secure the necessary improvement in its quality.

The sale of foods generally received attention. In the testing of alcoholic spirits, seven samples were found to contain excess water, and the hotel proprietors concerned are being proceeded against for breaches of the Health Acts.

Miscellaneous Prosecutions of Food Vendors, in Toowoomba and District, for the Year 1936–37.

Date.	Place.	Nature of Offence.	Fines.	Costs.
			£ s. d.	£ s. d.
1936—				
18th September ..	Toowoomba ..	Adulterated milk	15 0 0	1 7 0
21st September ..	Toowoomba ..	Water on milk vehicle	6 0 0	1 7 0
21st September ..	Toowoomba ..	No name and address on milk vehicle ..	1 6 0	1 7 0
21st September ..	Toowoomba ..	Adulterated milk	15 10 0	4 10 0
1937—				
16th February ..	Warwick	Adulterated milk	14 10 0	1 7 0
17th June	Texas	Adulterated whisky	Case adjourned.	
17th June	Texas	Adulterated rum	Case adjourned.	
21st June	Goondiwindi ..	Adulterated milk	14 0 0	1 7 0
Totals ..	..	..	£66 6 0	£11 5 0

Fruit Contaminated with Arsenic.—One hundred cases of apples from a Southern State were found to be heavily contaminated with an arsenical spray, and these were allowed to be sold after receiving treatment to effectively remove the poison.

Unsound Food.—A total weight of 1 ton 8 cwt. 0 qr. 5 lb. of foods found unfit for human consumption, by reason of being unsound or deteriorated, was destroyed under departmental supervision.

ROCKHAMPTON.

Work at the sub-office at Rockhampton for the period under review has been energetically carried out by the Department's officer.

Milk Supply.—The milk supply of the city has received special attention. Of fifty-four official samples submitted, the analyst reported five as being deficient in milk-fat, and two adulterated with added water.

In one instance the adulteration was slight, and a satisfactory explanation having been received the vendor concerned was warned. In the other instance the adulteration was 10 per cent., and the firm selling the milk was proceeded against, the presiding magistrate imposing a penalty of £10 and 16s. 6d. costs on each member, making a total of fines £20 and costs £1 13s.

At Longreach two vendors of milk were prosecuted for having sold milk that was adulterated. In one case the adulteration consisted of 14·5 per cent. added water, said to have been added in the form of ice with a view to cooling the milk, and the defendant was convicted and fined £14 and £1 7s. costs. The adulteration in the other case consisted of a 51 per cent. deficiency in the quantity of milk-fat (3·3 per cent.) required to be present, and a fine of £2 and £1 7s. costs were secured.

Spirituous Liquors.—The testing of liquors dispensed at hotel bars resulted in the prosecution of one publican for the sale of rum adulterated with added water, a fine of £5 and £1 7s. costs being imposed.

Bread.—Bakehouses have received careful attention. One baker was called upon to reconstruct his bakehouse, and several required to effect necessary requirements. The weight of bread was checked from time to time.

An incidence of "rope" at one bakery was cleared up on the thorough cleansing and usual treatment of the premises.

Foodstuffs Generally.—Inspection of stores and all other premises of food manufacturers and sellers was carried out, and the removal of various breaches of the Acts and Regulations secured. In this regard, among other matters, several storekeepers were found to be selling South African cod fillets under the name of "Haddock"; fruit drinks were misdescribed and contained prohibited substances; and apples were contaminated with arsenic as a result of having been sprayed with a poisonous insecticide.

Food Samples.—Samples of food submitted for analysis during the year included ærated drinks, beer, baby powder, medicinal herbs, and sauces. Samples of eight brands of draught beers were reported by the Government Analyst as conforming to the prescribed standard.

Poisons.—In the enforcement of "The Poisons Regulations of 1934," a number of storekeepers were warned in connection with the illegal sale of Schedule No. 1 poisons.

MACKAY.

The Department's officer at Mackay, apart from his work at that centre, also visited the following country centres in the course of his duties under Part VI. of the Health Acts—Pleystowe, Walkerston, Glenella, Farleigh, Wandaroo, Leap, Kuttabul, Mount Pelion, Kolijo, Calen, Pindi Pindi, Yalbaroo, Sarina, Nebo, Retreat, Range, Eton, Baker's Creek, Homebush, Eimeo, Seaview, Koumala, Ilbilbie, Orkabie, Carmila, Marian, Mirani, Gargett, Pinnacle, Finch Hatton, Netherdale, Eungella, Proserpine, Bowen, Merinda, Collinsville, Hillend.

Samples of foodstuffs were obtained and submitted for analysis. Of 114 samples of milk so submitted, 87 conformed to the legal standard, 23 were deficient in the minimum proportion (3·3 per cent.) of milk-fat required to be present, and the remaining 4 were adulterated with added water.

The vendors of the four watered samples were proceeded against in the Summons Court, and fines totalling £54 and £5 8s. costs were secured.

Food found unsound and subsequently destroyed under the supervision of our officer totalled 9 tons 12 cwt. 2 qr. 4 lb.

A prosecution was launched in the case of a person illegally in possession of cyanide of potassium. The police magistrate hearing the case imposed the minimum penalty of £20.

MISCELLANEOUS PROSECUTIONS IN MACKAY AND DISTRICT FOR YEAR 1936–37.

Date.	Place.	Nature of Offence.	Fines.	Costs.
			£ s. d.	£ s. d.
1936—				
21st August ..	Mackay	Illegal possession of cyanide of potassium ..	20 0 0	1 7 0
23rd October ..	Mackay	Adulterated milk	12 0 0	1 7 0
23rd October ..	Mackay	Adulterated milk	19 0 0	1 7 0
1937—				
24th March ..	Sarina	Adulterated milk	4 0 0	1 7 0
16th June	Proserpine ..	Adulterated milk	19 0 0	1 7 0
Totals ..	..	..	£74 0 0	£6 15 0

TOWNSVILLE.

The Department's officer at Townsville has, in addition to his sanitary duties, carried out inspections under Part VI. of the Health Acts and Regulations made thereunder.

Milk Supply.—Attention has been given to the milk supply of the city, and seventy-three samples of milk were secured and submitted to analysis. Forty-one of these complied with the legal standard, whilst thirty were deficient either in milk-fat or total solids, and two were adulterated with added water.

The majority of the samples found deficient in fat were drawn from milk-bars, the deficiency being no doubt due to failure on the part of the vendors to keep the milk thoroughly mixed by agitation. Suitable plungers have now been installed by the proprietors of these bars in order to secure the proper distribution of fat.

Eleven official samples of milk were obtained at Ingham; six conformed to standard, one was deficient in milk-fat, and four were heavily adulterated with added water. Prosecution of the offending milksellers resulted in fines totalling £64 10s. 6d. and £5 8s. costs.

Fifteen samples, secured from vendors at Charters Towers, were reported by the analyst as conforming to the legal standard for milk.

Of fifteen samples of milk obtained at Ayr, one was deficient in fat and two were adulterated with added water. Prosecution of the sellers of the watered samples is now pending.

Ice-cream.—The mode of manufacture and quality of ice-cream were matters receiving attention. Nine samples were submitted for chemical analysis, and seven of these conformed to standard provided by the Food and Drug Regulations, whilst two were deficient in the quantity of milk-fat (10 per cent.) required to be present.

Miscellaneous Samples.—During the year samples of the following articles were submitted to the Government Analyst for examination, viz.:—Chalks, chewing gum, Chinese medicines, cod-cutlets, crayons, curry powder, paint, pastels, rum, soap, and Venice turpentine.

Unsound Foods.—This Department's officer certified to the destruction of some 1 ton 7 cwt. 1 lb. of deteriorated foodstuffs, in addition 83 boxes of chewing gum, 8 cases of pineapples, and 2½ cases of bananas found unfit for human consumption were similarly dealt with.

Poisons.—The sale and use of poisons were supervised. In addition to minor breaches of the regulations, which were suitably dealt with, a firm of storekeepers in a country town were proceeded against for having packed a scheduled poison in food containers (beer bottles), resulting in a fine of £3 10s. and £3 3s. costs being secured.

In addition to his duties in and around Townsville, the Department's officer has paid visits of inspection to the following outside places in his district:—Ingham, Halifax, Mount Isa, Cloncurry, Julia Creek, Richmond, Hughenden, Charters Towers, Ayr, Home Hill, Brandon.

CAIRNS.

The officer in charge of the Cairns sub-office reports a busy year and, as a result of inspections made under Part VI. of the Health Acts, a number of prosecutions were launched for breaches of the Acts and Regulations.

Spirituous Liquors.—The usual attention was given to the quality of spirits dispensed by hotelkeepers. Three licensed victuallers were successfully proceeded against for selling adulterated whisky and rum. Fines totalling £11 and £4 10s. costs were imposed by the magistrates hearing the cases, and in each instance a copy of the conviction, in the form of a placard, was ordered to be displayed on the premises for a period of fourteen days.

Bread.—Bakeries were visited and inspected, and bread weighed. Four bakers found to be baking bread which was deficient in its due weight were prosecuted, and £19 10s. in fines and £1 10s. costs were recovered.

Milk Supply.—Thirty-three official samples of milk were submitted for analysis. Three of these contained added water and four were deficient in milk-fat. The dairy farmer found to be supplying the adulterated milk was proceeded against in the summons court, and the presiding magistrate imposed a fine of £11 and £3 9s. costs.

Food and Drug Regulations.—Two prosecutions were undertaken for breaches of the Food and Drug Regulations, 1928. A café proprietor was convicted of having failed to maintain his premises in a clean condition, whilst a shopkeeper was punished for exposing foodstuffs to contamination; penalties secured were, fines £1 10s. and costs £3 3s.

Tobacco Leaf.—Two hundred and fifty-two check samples of tobacco leaf were obtained from Mareeba and Dimbulah districts and submitted to analysis. The Government Analyst's reports on these samples indicate that considerably less arsenate of lead is now used by tobacco growers to combat insect pests, and that 75 per cent. of the leaf examined was entirely free of the poison.

Unsound Foods.—A total of 17 cwt. 1 qr. 20 lb. of foodstuffs was certified by the Department's officer as being unfit for human consumption.

Twenty-one cases of apples found to be contaminated with arsenate of lead were cleaned of the poison before being offered for sale.

Poisons.—The inspector reports that chemists and licensed poison dealers throughout the area under his control were found to be satisfying the provisions of "The Poisons Regulations of 1924."

Outside Areas.—During the year under review the officer at Cairns visited the following country centres:—Alma Den, Atherton, Babinda, Cardwell, Chillagoe, Croydon, Dimbulah, Einasleigh, El Arish, Forsayth, Garradunga, Georgetown, Kidston, Kuranda, Malanda, Mareeba, Millaa Millaa, Miriwinni, Mount Surprise, Mourilyan, Normanton, Ravenshoe, Silkwood, South Johnstone, Tully, and Yungaburra.

LEGISLATION, &c.

During the year the following additions and re-enactments were gazetted and put into operation on and from the date shown:—"*The Health Acts Amendment Act of* 1936" was assented to on 17th December, 1936; "The Private Hospitals Regulations, 1937," were gazetted on 3rd June, 1937; "The Rat Prevention and Destruction Amendment Regulations of 1936" were amended and gazetted on 23rd July, 1937, to remain in force until 31st December, 1939.

The following regulations were re-enacted:—

The Mosquito Regulations of 15th April, 1937, for a period of five years.

The Spitting Regulations on 18th February, 1937, for a period of five years.

The Camp Regulations on 18th February, 1937, for a period of five years.

The Hookworm (*Anchylostomiasis*) Regulations on 7th January, 1937, for a period of five years.

The Health (Fish Supply) Regulations on 31st October, 1936, for an unspecified period.

On the 18th February, by Order in Council, the State Nutritional Advisory Board was constituted, with the Director-General of Health and Medical Services as Chairman. A schedule attached, set out for the Board the following extensive series of functions and duties:—

Schedule.

(1) To report upon the standard of human nutrition (including malnutrition) in the State or in any part of it.

(2) To investigate the diets in use in any public institution or group of such institutions, and to advise the Minister as to any desirable additions to or emendations of such diets.

(3) To report upon the diets provided gratuitously or otherwise to persons employed in any business, industry, or enterprise in the State, and to advise the Minister as to any desirable additions to or emendations of such diets.

(4) To investigate the conditions, frequency, and times under, with, or at which, food is prepared for, provided to, or consumed by any person or group of persons employed in any business, industry, or enterprise.

(5) To investigate the nourishment of school children, pre-school children, and infants, and to determine what effects, if any, are produced by locality, race, occupation, season, and climate, and the availability or otherwise of various types of foodstuffs.

(6) To analyse and investigate available foodstuffs in the State; to compare and contrast the information so obtained with figures obtained by investigation in other localities and, in particular, to advise upon any deficiencies in the composition of staple articles of diet available to the working man, and measures for correcting the same.

(7) To investigate the matter of aboriginal diet from the points of view of suitability and accessibility.

(8) To collect, summarise, and, from time to time, as approved, to publish information on the measures (if any) desirable for securing improved nutrition, particularly in respect of mothers, infants, school children, inmates of institutions, industrial workers, agricultural labourers, unemployed persons, and persons in receipt of relief.

(9) Generally to correlate inquiries into all aspects of human nutrition, and for this purpose, with the approval of the Minister, to co-opt members to this Board as and when required, and for such period as may be necessary and desirable.

(10) To furnish an annual report to the Minister upon the work and activities of the Board.

The report to which reference is made in section 10 is attached to this annual report as Appendix D.

STAFF APPOINTMENTS—TRANSFERS AND EXTRA-DEPARTMENTAL ARRANGEMENTS.

Towards the end of the year 1936, the Federal Health Council, which had formerly consisted of one representative from each State, and three representatives from the Commonwealth of Australia, was re-constituted, and several representatives of medical and surgical organisations, research institutions, and the universities having medical schools, together with one male and one female lay representative, were added to constitute a new body, to be known as the National Health and Medical Research Council.

This Council met for the first time in Hobart at the beginning of 1937. The representative for Queensland was the Director-General for Health and Medical Services. As mentioned in the earlier stage of the Report, Queensland was successful in securing a grant of £500 from the Council as a preliminary sum towards the investigation of the epidemiology of leprosy in North Queensland.

In the early part of the year 1936, the Commonwealth Government also established an Advisory Council on Nutrition, to which the Director-General was appointed by the University of Queensland as its representative. With funds provided by the Commonwealth, an investigation was made into the diets in use in middle-class families in Brisbane, with a view to determining the average sufficiency and biological efficiency of these local dietaries. It will be completed on 31st August, 1937. This Department also provided facilities for an investigation by a Commonwealth officer into the dietetic conditions obtaining in the more arid south-west portion of the State.

A step of very definite importance was taken to strengthen the inter-relation between the Department of Health and Home Affairs, and the Medical Faculty within the University of Queensland, recently inaugurated. The Director-General was offered, and accepted, the Professorship in Social and Tropical Medicine, as from the end of March, 1937. The Minister for Health and Home Affairs (Hon. E. M. Hanlon) permitted Sir Raphael Cilento to undertake the duties of this position in an honorary capacity. The appointment provides an extremely valuable official link between the Department and the medical course within the University of Queensland, in which preventive medicine is emphasised as strongly as curative medicine, and in which the student will be taught his duty to the State in the matter of community risk and public health responsibilities, as definitely as he will be taught his duty to the individual and his private medical relationships. Moreover, the particular geographic climatic and social circumstances of Queensland make it essential that tropical medicine should be taught as a routine part of the medical course, and not as a post-graduate subject. Social medicine, moreover, including parasitology, environmental hygiene, preventive medicine, public health, industrial hygiene, forensic medicine, medical ethics, and hospital administration, will be included within the range of the new University Professorship. This is the first time that social medicine, as such, and tropical medicine, as a routine medical subject, have been recognised, and the professorship is the first established in any Australian University. In the past there has been a tendency to regard preventive or social medicine as an ill-defined adjunct to the curative side of the subject. In the report furnished by the Select Committee, which reported to the Government in 1935 on the desirability of establishing a Faculty of Medicine, it was strongly emphasized that these aspects of medicine should from the outset, be actively before the attention of the student. Medical students, moreover, in the study of institutional medical routine, will have access, through this Department which controls all such institutions, to every facility in respect of the practical side of the subject. The teaching activities, in association with the new appointment, begin in February, 1938.

During the year the Director-General was also invited to deliver the Livingstone Lectures for Camden College, Sydney, New South Wales, and took as his subject, "Nutrition and Numbers."

In June, 1937, following a volcanic outbreak in Rabaul, capital of the Mandated Territory of New Guinea, the services of the Director-General were requested by the Commonwealth Government, in order that an investigation might be made as to the probable sequelæ in a medical sense. A report, with recommendations, was submitted to the Minister in Charge of Territories for the Commonwealth of Australia.

At the close of the official year, with the resignation of Dr. H. Byam Ellerton, who for many years had carried out efficiently the duties of Inspector-General of the Insane, Dr. John Coffey, Deputy Director-General of Health and Medical Services, was appointed to fill that post. It is anticipated that this appointment will bring that section of the service into more intimate relation with the central office, than has been the case in the past. Previously in February, Dr. Coffey was appointed as official visitor to the Hospital for Insane, at Willowburn, Toowoomba.

On the 12th September, 1936, Dr. J. Grahame Drew resigned from the position of Health Officer, and was succeeded by Dr. A. Fryberg, who took up duty from the 21st November, 1936.

Dr. D. W. Johnson was appointed Temporary Medical Officer attached to the Laboratory of Microbiology and Pathology (Mobile Unit) as from the 21st January, 1937.

Mr. D. J. W. Smith was appointed Assistant Bacteriologist in that Laboratory also, and allocated to the Mobile Unit, as from the 5th February, 1937.

Staff Nurse E. M. Cruise retired from the service on the 31st December, 1936, and was succeeded by Staff Nurse M. D. Halliday, who took up duty on the 1st January, 1937.

Inspector R. Woodley was transferred from the head office to Rockhampton, in the place of Inspector H. P. Lowes, who was transferred to Brisbane on the 31st January, 1937.

Cadet Inspector G. L. T. Wright resigned as from the 8th March, 1937, and was replaced by the appointment of Cadet Inspector C. V. James on probation, as from the 4th May, 1937.

Including those publications mentioned in the report elsewhere, work published by the Department and appearing in the " Medical Journal of Australia " was as follows:—

Derrick, E. H., " Compensation for Miliary Tuberculosis," "Medical Journal of Australia," 26th September, 1936, page 444.

Derrick, E. H., and Brown, H. E., " Rat-bite Fever, Some Observations," " Medical Journal of Australia," 24th October, 1936, page 553.

Clayton, G. E. B., Derrick, E. H., and Cilento, R. W., " The Presence of Leptospirosis of a Mild Type (Seven-Day Fever) in Queensland," " Medical Journal of Australia," 1st May, 1937, page 647.

Johnson, D. W., Brown, H. E., and Derrick, E. H., "Weil's Disease in Brisbane," " Medical Journal of Australia," 29th May, 1937, page 811.

GENERAL.

There is considerable ground for gratification in recording the high standard of health maintained and extended in Queensland during the year under review. With the passage of the Local Government Act, and the Hospitals Act of 1936, the position in regard to local government in health matters was better defined, and local authorities have operated in the exercise of a new and somewhat increased range of duties very zealously.

I desire to express my thanks to the Deputy Director-General (Dr. Coffey), to Dr. Derrick, Dr. Fryberg, Dr. Hayes, Dr. Johnson, and all other officers of the clerical, inspectorial, and other staffs, for willing service throughout the year. I desire to thank also the several other Departments with which this Branch comes frequently into contact, for valuable assistance rendered during the year, and in particular to express my acknowledgment of the valuable assistance that has been provided by the Crown Law Department, the Government Analyst and his staff, and the Police Department.

Co-operation and co-ordination of effort has been a material factor in increasing the efficiency of the work which the officers of this Department have been able to perform.

RAPHAEL W. CILENTO,
Director-General of Health and Medical Services.

Appendix A.

HOOKWORM CAMPAIGN.

DEPARTMENT OF PUBLIC HEALTH.

ANNUAL REPORT, 1937.

GENERAL.

The staff working for field hookworm control at the beginning of July, 1936, comprised a microscopist and one residential nurse at Cairns, one residential nurse at Innisfail, one residential nurse at Tully, one residential nurse at Ingham, and one residential nurse at Atherton. No sanitary inspectors were attached to the campaign owing to their being temporarily transferred for Weil's disease work.

Owing to the schools being far distant from the centre at Atherton and the small infestation rate among the children already examined, it was decided to transfer Nurse Vincent to Mackay at the beginning of 1937 to carry out general school medical work only.

During April, 1937, the Tully centre was closed and Nurse Bowder was transferred to Cairns to carry out hookworm duties.

The small amount of work remaining to be done in Tully was completed by the nurse from Cairns.

Since the arrival of Nurse Bowder in Cairns her time has been occupied in examining children who commenced school during the last six months, and in assisting the microscopist in the laboratory.

During March of 1937, Inspectors Kennedy, Williamson, Macgregor, and Mor were transferred to the Hookworm Campaign to carry out hookworm duties.

The present disposition of officers is as follows :—Cairns, S. Thompson, Microscopist, Nurse M. Thomsen, Nurse K. Bowder, and J. Williamson, Sanitary Inspector ; Innisfail, Nurse E. D. Brennan, J. Kennedy, Sanitary Inspector, and D. S. Macgregor ; Ingham, Nurse A. S. Webb, and V. Mor.

When the inspectors reported to the Microscopist for hookworm duties and before commencing hookworm field work each officer received one week's training from Inspector Kennedy at Innisfail.

After this was completed, Inspector Williamson commenced a house to house intensive survey of the Parramatta sub-area in the Cairns area. Inspector Kennedy commenced a house-to-house intensive survey of Mourilyan sub-area in the Innisfail area. Mr. D. S. Macgregor assisted the resident nurse at Innisfail with the collecting of re-examination specimens, delivery of treatments, and follow-up work. Mr. V. Mor assisted the resident nurse at Ingham with the collecting of re-examination specimens, delivery of treatments, and follow-up work.

While the above work was being carried out each officer did sanitary inspection work.

The figures for hookworm and sanitation work carried out by these officers is shown in the attached tables.

Since the completion of the hookworm school survey, the nurses' time has been fully occupied in doing follow-up work, treating positive hookworm hosts to a cure, together with general school medical work.

Of the 10,291 specimens examined during the year under review, 1,132 showed positive results ; as shown in the attached table, 788 of the hookworm hosts have been treated to a cure. Also, 714 specimens contained ova of other parasitic worms, namely, *Oxyuris vermicularis, Trichuris trichiura, Ascaris lumbricoides, Hymenolepis nana, Trichostrongylus orientalis,* and *Taenia solium.* Only a few of the last two forms were found.

As mentioned in my previous annual report, several doses of hookworm treatment had to be given to the hosts who were harbouring the Ancylostoma type of hookworm before effecting a cure.

Arrangements were made with the medical officer of the District Hospital in each centre for all hosts heavily infested with hookworms to be treated in hospital and kept under observation. Also, children under three years and adults over sixty years were referred to hospital for treatment.

Of the 100 re-examination specimens received from the aborigines at Yarrabah Mission, sixty-three showed negative results on examination. Re-examination specimens are being received from the positive hosts at this mission until negative results are shown.

No treatments are shown in the attached table for aborigines at Yarrabah, as this work is now carried out by the mission people themselves.

During the year mass treatment work was carried out by Nurse Thomsen with the assistance of the microscopist at the homes of positive white children and also at the homes of aborigines at Skeleton Creek, Hambledon, White Rock, Woree, Sand Pit, and Esplanade in the Cairns area. This is the best method of treating hookworm disease for obtaining more certain cure.

It will be noticed in the attached table of hookworm cultures that the Ancylostoma type of hookworm predominates in the Cairns, Innisfail, and Ingham areas.

Of the 248 school children re-examined after being cured six months, only twenty-seven were reinfested with hookworms, which shows that the sanitation at the homes is being kept up to a fair standard.

Most of the work shown in the attached tables has been carried out by the nurses and the microscopist.

The medical practitioners and school teachers in the hookworm belt have given all possible assistance to the Hookworm Campaign in helping to eradicate hookworm disease.

The microscopist visited each centre and discussed hookworm matters with the nurses and interviewed the health inspectors of the Local Authorities.

Attached hereto please find tables giving figures of each area with headings to indicate the nature of the work done.

Returns of sanitation and other works carried out by the inspectors in each area are attached.

S. THOMPSON, Microscopist in Charge.

The Director-General of Health,
Brisbane.

HOOKWORM CAMPAIGN.

ENDEMIC AREA UNDER RESIDENTIAL CONTROL.

Table to Accompany Annual Report, 1937.

Name.	Census.	Specimens.					Treatments.				
		Received.	Exam'd.	Re-exam'd.	Positive.		Notices.	Delivered	Posted.	E. C'ts.	Cured.
					H. W.	Others.					
Cairns Area—											
Schools	2,959	3,129	2,922	207	213	230	227	194	23	67	140
Innisfail Area—											
Schools	860	963	898	65	56	112	102	22	43	10	53
Tully Area—											
Schools	146	221	123	98	23	15	25	15	7	21	76
Ingham Area—											
Schools	877	1,051	913	138	143	132	159	179	1	84	64
Atherton Area—											
Schools	695	662	648	14	31	29	14	31	1	0	11
School Total	5,537	6,026	5,504	522	466	518	527	441	75	182	344
Intensive Survey—											
Cairns Area—											
Parramatta Sub-area	809	739	739	..	24	18	19	24	..	..	..
Woree Sub-area..	179	137	137	..	7	6	6	7	..	..	..
Innisfail Area—											
Mourilyan Sub-area	319	288	288	..	19	14	19	15	..	3	..
Intensive Survey Total	1,307	1,164	1,164	..	50	38	44	46	..	3	..
Other Hosts in—											
Cairns Area.. ..	..	85	..	85	30	..	..	24	7	30	55
Mossman Area ..	..	46	..	46	12	..	..	..	7	12	34
Innisfail Area ..	..	212	..	212	94	13	2	13	8	71	118
Tully Area	..	154	..	154	51	..	..	19	18	51	103
Ingham Area ..	..	99	..	99	60	2	1	53	..	60	39
Atherton Area ..	..	4	..	4	..	..	..	..	..	..	4
Other Hosts Total ..	..	600	..	600	247	15	3	109	40	224	353
Miscellaneous—											
Cairns Area ..	624	586	586	..	61	42	42	42	13	61	..
Mossman Area ..	85	85	85	..	5	4	10	..	5	5	..
Innisfail Area ..	1,001	884	884	..	64	47	50	57	48	47	..
Tully Area ..	247	227	227	..	3	5	3	2	2	3	..
Ingham Area ..	518	345	345	..	55	8	10	58	..	55	..
Atherton Area ..	13	15	15	..	4	..	..	..	..	..	..
Miscellaneous Total ..	2,488	2,142	2,142	..	192	106	115	159	68	171	..
Aborigines—											
Yarrabah Mission ..	49	149	49	100	61	29	1	..	..	8	63
Cairns Area ..	113	125	96	29	62	4	2	*112	2	59	12
Innisfail Area ..	11	73	25	48	45	4	5	31	6	39	14
Tully Area	2	2	2	..	2	..	..	..	3	2	..
Atherton Area ..	6	8	5	3	5	..	..	6	..	..	2
Ingham Area ..	2	2	2	..	2	..	..	2	..	2	..
Aborigines Total ..	183	359	179	180	177	37	8	151	11	110	91
All Areas—											
Cairns Area ..	4,733	4,950	4,529	421	458	329	297	403	45	225	270
Mossman Area ..	85	131	85	46	17	4	10	..	12	17	34
Innisfail Area ..	2,191	2,420	2,095	325	278	190	178	138	105	170	185
Tully Area	395	604	352	252	79	20	28	36	30	77	179
Ingham Area ..	1,397	1,497	1,260	237	260	142	170	292	1	201	103
Atherton Area ..	714	689	668	21	40	29	14	37	1	..	17
Grand Total ..	9,515	10,291	8,989	1,302	1,132	714	697	906	194	690	788

* These Aborigines were mass treated by the Microscopist and Nurse Thomsen.

Hookworm Cultures.

Areas.	Ancylostoma.	Necator.	Mixed.
Cairns Area	55	12	12
Mossman Area	1	3	1
Innisfail Area	21	..	2
Ingham Area	20	..	..
Atherton Area	..	6	..
Totals	97	21	15

SCHOOL GOING CHILDREN.

Re-Examination after being Cured Six Months.

Name of Areas.	Received.	Re-examined.	Re-infected, H.W.	Others.	Still Cured.
Cairns Area	100	100	5	..	95
Innisfail Area	84	84	13	6	71
Tully Area	37	37	..	2	37
Ingham Area	27	27	9	..	18
Totals	248	248	27	8	221

ADDENDUM TO HOOKWORM REPORT.

Sanitation.

Cairns City (Parramatta–Bungalow).

Number of places visited	199
Number of sanitary conveniences inspected	191
No action required	90
Number of defective cabinets	101
Re-inspections	*109
Action taken	36
Action partially taken	20
No action taken	53
Number of places with no sanitary convenience	8
Number of septic tanks	16

Cairns Shire.

——	Babinda.	Edmonton,	Gordonvale.	Woree Sub-area.	Total.
Number of places visited	8	16	20	70	114
Number of sanitary conveniences inspected	8	15	20	76	119
No action required	3	4	7	32	46
Number of defective cabinets	5	12	13	44	74
Re-inspections	*5	*13	*13	*44	*75
Action taken	..	5	7	16	28
Action partially taken	5	3	4	9	21
No action taken	..	4	2	19	25
Number of places without sanitary convenience	..	1	..	..	1
Number of spetic tanks	..	..	..	2	2

* These figures refer to the number of cabinets re-inspected, not the number of re-inspections made.

Johnstone Shire.

——	General.	Mourilyan.	Total.
Number of places visited	10	42	52
Number of sanitary conveniences inspected	10	42	52
No action required	6	20	26
Number of defective cabinets	4	22	26
Re-inspections	*4	*22	*26
Action taken	1	2	3
Action partially taken	3	20	23
No action taken	..	..	..
Number of places without sanitary conveniences	..	..	..
Number of septic tanks	..	..	..

* These figures refer to the number of cabinets re-inspected, not the number of re-inspections made.

Hinchinbrook Shire.

Number of places visited	85
Number of sanitary conveniences inspected	83
No action required	39
Number of defective cabinets	44
Re-inspections	..
Action taken	..
Action partially taken	..
No action taken	..
Number of places without sanitary conveniences	3
Number of septic tanks	..

Classification of Cabinets.

D. Class	Regulation cabinet
G Class	Below standard, but not allowing soil pollution
E Class	Allowing soil pollution
F Class	No sanitary convenience

Cairns City (Parramatta–Bungalow).

After first inspection—

D. Class.	G. Class.	E. Class.	F. Class.
90	90	11	8

After re-inspection—

D. Class.	G. Class.	E. Class.	F. Class.
126	55	10	8

Cairns Shire.

After first inspection—

D. Class.	G. Class.	E. Class.	F. Class.
46	53	20	1

After re-inspection—

D. Class.	G. Class.	E. Class.	F. Class.
66	40	14	..

Johnstone Shire.

After first inspection—

D. Class.	G. Class.	E. Class.	F. Class.
26	22	4	..

After re-inspection—

D. Class.	G. Class.	E. Class.	F. Class.
28	20	4	..

Hinchinbrook Shire.

After first inspection—

D. Class.	G. Class.	E. Class.	F. Class.
39	40	4	3

Appendix B.

GOVERNMENT CHEMICAL LABORATORY.

The Director-General of Health.
Department of Health, Brisbane.

Sir,—I have the honour, in accordance with section 31 of "*The Health Acts*, 1900 *to* 1934," to submit the following report of work done in the Government Chemical Laboratory for the Department of Health during the year ending 30th June, 1937.

The number of samples examined during this period was 8,182, an increase of 1,614 over last year's record number.

Table I.—Summary of Samples.

Nature of Sample.	Number of Samples.	Passed.	Failed.
Beverages and cordials	189	67	122
Bread	41	38	3
Condiments	14	11	3
Crayons	1,038	775	263
Disinfectants	17	10	7
Drugs and medicines	63	46	17
Essences	47	28	19
Fish (tinned)	49	31	18
Fish (not tinned)	17	17	..
Flour (wheat)	10	10	..
Fruit	782	59	723
Jelly crystals	35	14	21
Meat	20	11	9
Milk (fresh)	3,004	2,291	713
Milk preparations	35	23	12
Oil (vegetable)	10	9	1
Paint	128	22	106
Pathological specimens	146	128	18
Soap	14	11	3
Spirituous liquors	80	54	26
Tobacco	2,009	2,009	..
Toilet preparations	23	20	3
Toys	127	5	122
Vegetables	40	5	35
Vinegar	11	7	4
Water	111	..	..
Miscellaneous	122	87	35
	8,182	5,788	2,283

Table II.—Particulars of Legal Samples of Milk.

Distribution.	Number of Samples.	Passed the Standard.	Deficient in Fat.	Deficient in T.S. and/or S.N.F.	Watered.
Greater Brisbane	1,861	1,411	115	294	37
Ayr	15	12	1	..	2
Bowen	13	6	7	..	..
Bundaberg	14	10	2	1	1
Cairns	26	21	1	..	4
Charleville	10	6	4	..	..
Charters Towers	15	15	..	..	..
Goondiwindi	12	7	3	..	2
Gympie	19	17	..	2	..
Harrisville	67	59	2	3	3
Ingham	11	7	1	3	..
Ipswich	155	127	6	19	3
Mackay	80	68	5	5	2
Maryborough	17	9	5	1	2
Nambour	15	5	1	2	7
South Coast	146	118	12	14	2
Warwick	45	30	6	8	1
Redcliffe	50	33	2	15	..
Rockhampton	54	47	4	1	2
Toowoomba	93	76	11	1	5
Townsville	73	41	4	25	3
Other places (11)	54	40	4	7	3
	2,845	2,165	196	401	79

The universally condemned preservative—formaldehyde—was contained in four samples.

The effect of the low rainfall from July to December on the quality of the milk supply is shown in the table hereunder.

TABLE III.

—	July-December, Rain fall 556 points.	January-June, Rainfall 1,598 points.
	Per Cent.	Per Cent.
Adulterated with water	3·6	1·8
Free from added water, but deficient in fat	9·3	4·1
Below the standard in total solids and/or solids not fat	21·7	5·4
Contained preservative	0·3	. .
Passed the standard	65·1	88·7
	100·0	100·0

Apparently much of the milk supply during the first six months of the financial year was derived from starving herds.

TABLE IV.—MILK POSITION COMPARED WITH THE FIVE PREVIOUS YEARS.

Year.	Number of Legal Samples.	Deficient in Fat Per Cent.	Watered Samples. Per Cent.	Average Percentage of Added Water.
1931–32	1,865	7·8	4·1	10
1932–33	2,146	5·0	4·9	7
1933–34	2,250	5·4	3·1	8
1934–35	2,506	7·8	3·4	8
1935–36	3,327	8·8	2·7	11
1936–37	2,845	6·9	2·8	12

Bread.—A bread survey was initiated during the year, 41 samples being examined.

Much more, however, requires to be done before a true index of the position can be determined.

The average results so far obtained from the two principal breads on the market are as follows:—

TABLE V.

—	White Bread.	Whole Wheat Bread. (90% Whole Wheat.)
	Per Cent.	Per Cent.
Specific gravity	0·3	0·4
Water (entire loaf)	37·30	38·50
Protein	7·95	8·20
Ether extract (fat)	1·15	1·50
Carbohydrates	52·00	48·45
Crude fibre	0·10	1·50
Mineral substance	1·50	1·85
	100·00	100·00
Lime (CaO)	0·018	0·036
Digestible calories per pound	1,135	1,090

There has been no comprehensive investigation of the chemical composition of Queensland wheats.

Wheats of Victoria and New South Wales (thirty-one in number), have been shown to contain a lesser total proportion of mineral substance, including calcium, phosphorus, potassium, and magnesium, than that of wheats in other parts of the world. (Vide Australian Journal of Experimental Biology and Medicine (1935).)

Losses Involved in Baking.—Under this caption Hutchison and Mottram, in "Food and the Principles of Dietetics," p. 225 (1933), record the following statement:—"Very exact observations on this point have been made in a bakery at Pittsburg. It was found that 1·3 per cent. of the proteins, 71·2 per cent. of the fat, and 3·2 per cent. of the carbohydrates in the ingredients disappeared in the process of baking. The very great loss of fat is striking and has been confirmed by observations made at New Brunswick in which the fat in the original flour had diminished nearly 60 per cent. by the time the bread was completed."

In view of the important bearing this statement has on the fat soluble vitamins—destruction of the fat being presumptive evidence of the destruction of a like proportion of fat soluble vitamin—it was deemed of sufficient importance by this laboratory to examine locally the position indicated.

Flour of ascertained fat content was converted into dough and baked, with the co-operation of two commercial bakeries.

The results are shown hereunder:—

TABLE VI.

BAKER A.

Material.	Fat (ether extract) calculated on water free basis.
	%
Flour used—80 per cent. whole wheat and 20 per cent. white	2·5
Bread (tin greased)	2·4
Bread (tin not greased)	2·2

The apparent loss of fat was 12 per cent.

BAKER B.

Material.	Fat (ether extract) calculated on water free basis.
	%
90 per cent. whole wheat flour	2·5
Bread (tin greased)—	
Crust	2·5
Crumb	2·5
Entire loaf	2·5
Bread (tin not greased)—	
Crust	1·8
Crumb	2·5
Entire loaf	2·3

The apparent loss of fat in baking was 8 per cent.

On the results of these experiments it would be reasonable to place the fat destruction in bread at about 10 per cent.

There is apparent, however, that loss of fat in the baking process is considerable in the crust. In the bulk of the loaf fat loss is not appreciable.

Air Space in Bread.—In order to stress the value of whole wheat and germ breads as against white bread a nutrition chart sold in Queensland stated "The best 'proprietary name' (germ bread) or wholemeal bread is not such a bulky loaf as white bread which contains up to 60 per cent. of gas," the intention being to assert an undue bulk for white bread. The statement is calculated to mislead, nutritionally irrelevant, and as the following measurements of air space in varieties of bread shows, inaccurate.

TABLE VII.

Variety of Bread.	Specific Gravity.	Volume (mils).	Air Space (per cent. by volume of loaf).
White	0·28	1,640	77
	0·32	1,360	74
	0·34	1,300	72
	0·30	1,550	75
90 per cent. whole wheat	0·41	1,180	67
	0·36	1,220	71
60 per cent. whole wheat	0·41	1,170	67
	0·40	1,080	67
Germ bread (about 5 per cent. germ)	0·31	1,160	74
	0·30	1,300	76

Both white and germ bread were practically identical in air space, 90 and 60 per cent. whole wheat breads being closer contained less air.

The cellular space in all the breads would be filled with air of similar composition. As part of a mixed dietary—including milk, meat, vegetables, and fruit—the white loaf is regarded by authority as a satisfactory food.

Beverages and Cordials.—Forty-one samples of fruit beverages were deficient in the low minimum proportion, namely, .5 per cent. of fruit juice required to be present.

Nine samples contained preservative in excess of the permitted amount, and thirteen contained saccharin. Addition of saccharin to food substances is rightly prohibited.

Seventeen samples were misdescribed, and thirty-eight were wrongly labelled.

It is difficult to justify the use of artificial fruit essences in a State possessing as great diversity of fruit wealth as does Queensland.

Fruits are remarkably rich in vitamins. It has been recently shown that 1 lb. of apricots, either fresh or dried, contains about the same number of units of Vitamin A—namely, 17,000 —as 1 lb. of good fresh butter.

Vitamin A is the growth and anti-infective vitamin. Deficiency of it in the diet prevents growth, and would appear to lower the resistance of the body to infective disease. The papaw with 11,000 units per pound, and the pineapple and the yellow peach, are also well supplied with Vitamin A.

Oranges.—It was deemed of interest to confirm, for varieties on the local market, the statement made by more than one authority that oranges contain a nutritionally important amount of lime.

It is to be remembered that, apart from the contribution of milk and cheese, usual human diets contribute only about 50 per cent. of the lime requirement of the human system.

TABLE VIII.—EXAMINATION OF ORANGE JUICE.

Constituents.		Washington Navel.	Valentia Late.	Joppa.	Mediterranean Sweet.	From N.S.W.	Common Orange (Sabina).
Total solids	%	10·0	11·4	10·0	10·4	10·4	11·7
Acidity (calculated as citric acid) ..	%	1·1	2·1	1·5	1·6	1·6	1·8
Ash	%	0·43	0·48	0·44	0·40	0·46	0·53
Lime (CaO)	%	0·013	0·013	0·012	0·010	0·012	0·012
Lime, per cent of ash	%	3·0	2·9	2·9	2·5	2·6	2·3

The lime figures are remarkably low in comparison with published results of the lime content—16·1 to 32·6 per cent.—of the ash of some varieties of California and Florida oranges.

The examination has shown that the orange, while admittedly on other grounds of high dietetic value, does not make any considerable contribution to calcium (lime) requirement.

Lemons.—Varieties of lemons on the local markets were examined with the following results:—

TABLE IX.

Constituents.		K.P.	Kenny's Lisbon.	Lisbon.	Benyenda.	Bush.
Total solids	%	8·9	8·2	8·4	8·1	8·4
Citric ash	%	5·6	7·4	6·9	7·7	5·9
Ash	%	0·32	0·37	0·37	0·44	0·37

The standard for lemon juice requires the presence of not less than 6 per cent. of citric acid. The citric acid content of lemons examined in previous years ranged from 5·4 to 8·5 per cent., the average being 6·9 per cent.

Fresh Fruit.—Of the 782 samples of fresh fruit examined 686 contained more than one-hundredth of a grain of arsenic to the pound. Most of this fruit came from other States. As the inspectors only remove fruit with appreciable evidence of spray residues on it the results cannot be accepted as being indicative of the total shipments affected.

One consignment of green bananas turned to a black colour when subjected to the artificial ripening process. Examination of them afforded the following results:—

	Sample A.	Sample B.
Arsenic on skin (grains per pound)	4·0	4·8
Arsenic in edible portion (grains per pound)	1·0	0·9

The grower of the bananas stated that the weeds surrounding the banana plants had been sprayed with arsenic pentoxide.

Fluorine Compounds.—In view of the following statement, taken from the " Journal of Economic Entomology " 27, 1934, health authorities might well hesitate before accepting flourine compounds as insecticides for use on any foodstuff.

> " Published data from the Ohio and Wisconsin agricultural experiment stations on the effect of Flourine compounds on rats, chickens, pigs and cattle show that this element is extremely poisonous."
>
> " Unpublished information proves that flourine is extremely dangerous in amounts near the tolerance established for flourine residues on sprayed fruit and vegetables."
>
> " Even the entomologist who sees the effect of decayed teeth and over-developed bones of the experimental animals is likely to be reluctant to risk food sprayed with flourine compounds."

Jam Making.—A housewife on finding her home-made jam misty in appearance and metallic to the taste submitted it for examination. Zinc was present at the rate of eight grains to the pound. Apparently a galvanized boiler had been used in the preparation of the jam—hence the zinc content.

Zinc and tin compounds are toxic to the human system. Both metals are also markedly attacked by dilute acid and alkali. No zinc coated vessel should be used for containing any foodstuff, and no acid material, such as soft drinks, should be contained in a zinc or tin coated container.

Copper vessels are generally used for jam making, but good enamelled or aluminium ware is safe for this purpose.

Formaldehyde in Food.—Reference was made in our last annual report to some high formaldehyde results obtained at the Torry Station (Aberdeen) on dry salt ling to which it was said no formaldehyde had been added.

One shipment of dry salt ling to this State recorded, by standard tests, 150 parts per million of formaldehyde, but we were not prepared to state that it was added.

Such fish are abnormal in character, and their fitness for human consumption might be questioned.

Apparently there is a degradation product formed in the fish which reacts to some tests for formaldehyde. Local fish examined at all stages of curing and decomposition recorded a maximum of only one part of formaldehyde per million.

Results obtained by this laboratory on other foods are recorded below.

TABLE X.

Food.	Formaldehyde (parts per million).
Oysters, beef, pork, mutton, and tinned pilchards	Nil
Gorgonzola cheese, salt herrings, salt salmon, tinned sild and salmon, prawns, and sand crabs	1 to 2
Tinned herrings (fillets)	7
Smoked red herrings	14
Smoked kippers	28
Smoked cod fillets	30

The keeping property of smoked food is chiefly due to the small quantity of formaldehyde naturally introduced by the process of " smoking." Our experiments have demonstrated that the tolerance for formaldehyde in smoked food should not exceed fifty parts per million.

Indelible Pencils.—There was recently published in the Press an extract, apparently taken from the " British Medical Journal," relative to the toxicity of methyl violet—the colouring substance of indelible pencils. It was said that " Any wound by a copying pencil should be regarded as a serious matter " and that permanent injury to lungs, liver, and kidneys was liable to result from absorption through a wound, or the dye.

Indelible pencils supplied to Queensland Government departments examined by this laboratory were found to contain methyl violet No. 680 (Rowe's Index)—that is the permitted food colour. It was free of arsenic and lead. Whether this is the methyl violet that is suspect we do not know. Methyl violet, No. 680, is permitted in food in many countries, including the United Kingdom and Australia. It is not, to our knowledge, an official food colour in the United States of America. "The medicinal quality of this dye has been used in both ophthalmic and general surgery as an antiseptic, but its use has been abandoned owing to unpleasant secondary effects " (Rowe's Index).

The Permitted Foodstuff Dye Position.—The increasing number of coal tar dyes permitted for use in food does not appear consistent with modern health administration.

The United States of America (Federal Territory), with the most comprehensive food and drug laws in the world, has only fifteen permitted coal tar dyes—which appears to be sufficient for all legitimate purposes—whereas Queensland has twenty-seven, and other Commonwealth States as many as thirty-five.

Australia adopted the American list for some years, but at the last Interstate conference on foods and drugs (1927) many additions were made to it. The analyst could control the American list, but in the presence of mixed dyes of the extended list the position is almost impossible to police.

Strong Solution of Ammonia.—The danger in handling strong solution of ammonia in the Queensland climate cannot be too strongly stressed. An article, described as "permanent waving solution," was found to contain 33·5 per cent. of ammonia. This is the strongest aqueous solution of commerce. Such solution at any elevated atmospheric temperature is under considerable gaseous pressure, and is apt to be forcibly expelled from the container on opening, with danger of serious injury to the eyes or respiratory tract. It has been recommended by this laboratory that in the interests of public safety solutions of ammonia marketed for toilet and household use should be of not more than 17 per cent. strength.

Tobacco.—Of 2,009 samples of tobacco leaf examined, 1,243 were free of lead arsenate, and the remainder, 766, were below the tolerance for it.

Hydrogen Peroxide.—Examination of nine different brands of 3 per cent. hydrogen peroxide afforded a range of from 2/83 to 3·3 per cent. of hydrogen peroxide. They conformed to the B.P. standard for this strength of peroxide.

The stability of one brand was observed. It contained 3·05 per cent. of hydrogen peroxide. At the end of eighteen months in the ice chest it yielded 2·98 per cent. Kept at air temperature for the same period the strength was only reduced to 2·45 per cent.

Crayons.—The limitation by your Department of the lead content of crayons intended for use by children has been effective in inducing manufacturers to provide for this market crayons free of lead and arsenic.

Toys.—There are still exporters to Australia of toys and other material who apparently are not cognisant of the State regulations governing such importations. Toys composed of lead alloys, and/or coated with paint containing an excessive proportion of lead, continue to arrive here.

Dangerous Toys in Prize or Lucky Packets.—It is enacted under the Queensland Health Acts that "No person shall place or have in any prize packet or other packet containing confectionery, any metallic ornament, toy, pin, or other article, or substance which is liable to contaminate such confectionery, or is capable of proving dangerous or deleterious in the hands of a child."

Of 107 toys examined under this provision, ninety were condemned because of their small size, or sharp wire fittings, or sharp cutting edges. They were liable to be dangerous in the hands of a baby or young child.

Matches.—Six different brands of matches were examined in regard to their chemical composition and physical characters. White or yellow phosphorus was once used in matches, but owing to its dangerous properties its use is prohibited in all countries. It has been replaced by scarlet phosphorus or phosphorus sulphide—chiefly the latter.

The striking surface for the safety match contains the phosphorus, the head containing the oxidising agents such as potassium chlorate and potassium nitrate.

The head of the wax match contains the phosphorus, mixed with oxidising material.

The temperature of ignition of individual match heads ranged from 160 deg. C. to 212 deg. C. Entire boxes ignited at about the same temperatures. They afforded no evidence of any marked tendency to spontaneous combustion.

The friction factor was irregular with all matches ranging from 4 (quickest striking) to 15 (slowest). No exception was taken to the chemical composition or physical character of any of the matches examined.

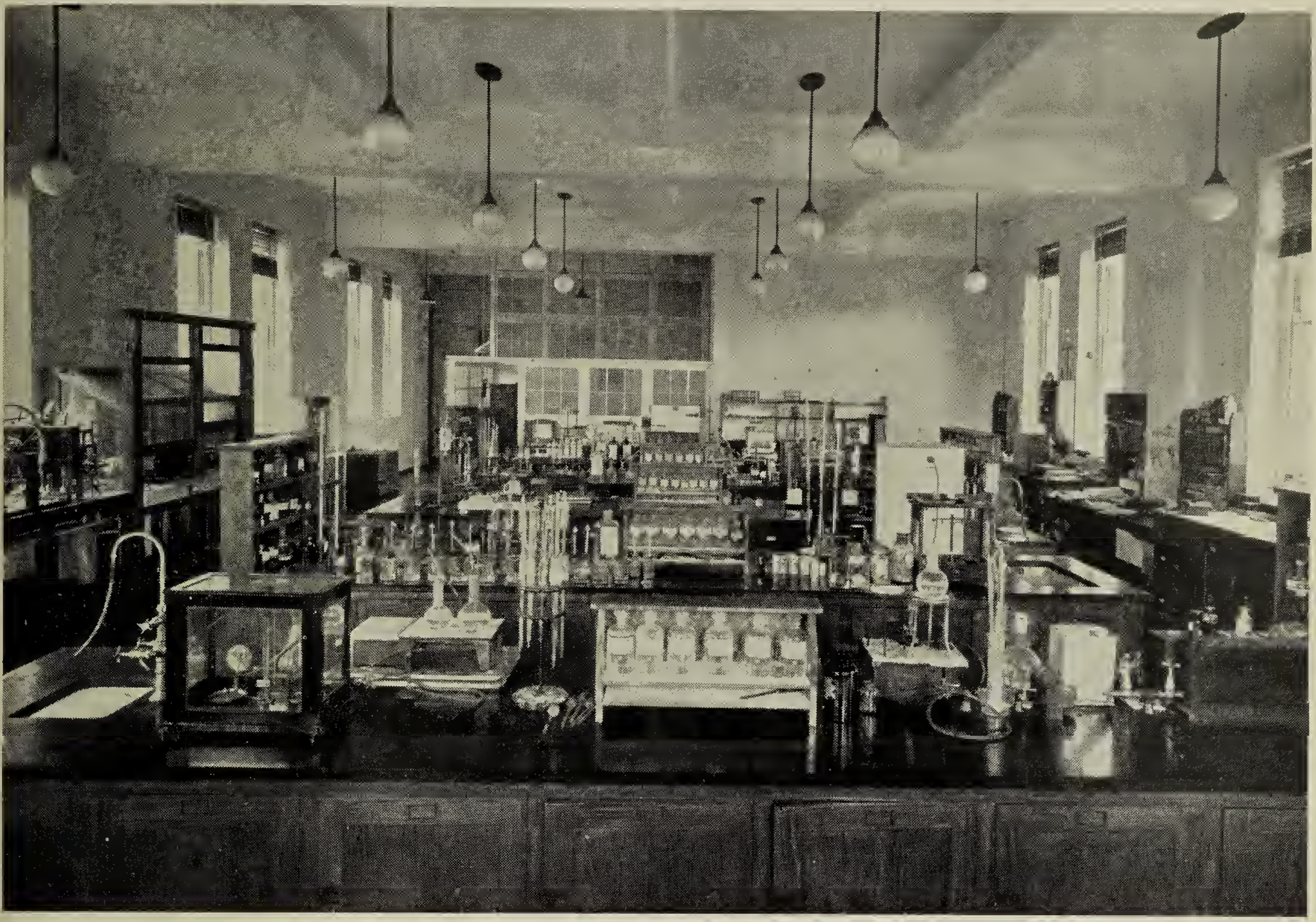
The miscellaneous samples included butter labels, cyanide, ammonia, cheese wrapping, baking powder, dyes, confectionery, fats, vitara, paint, fly sprays, leather dressing, brewers' hose, citric acid, poison containers, metal caps, sausage casings, sugar, turpentine, glass cleaner, malt extract, insecticides, albumen and peanuts.

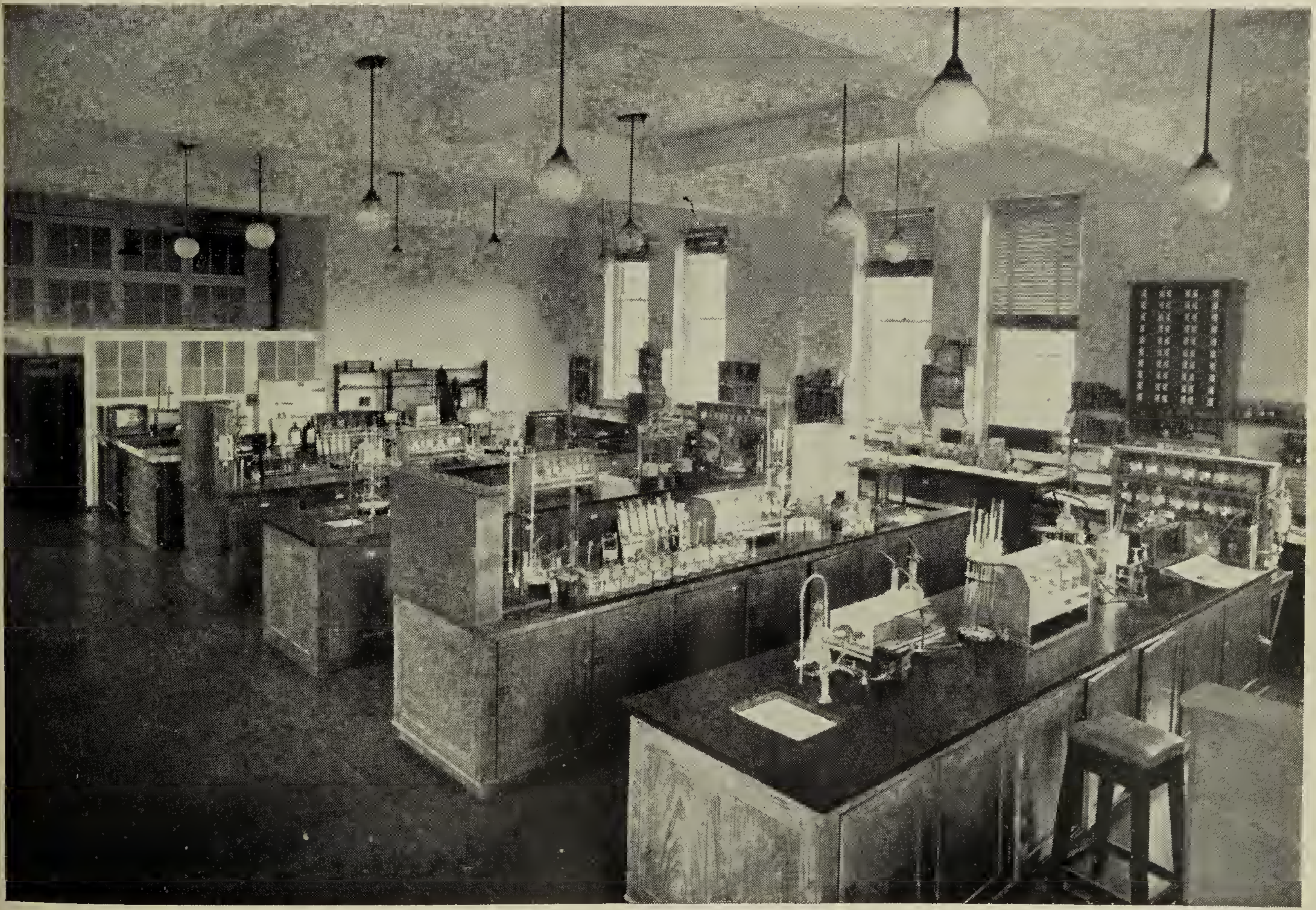
The above report was prepared by the Senior Analyst, Mr. L. A. Meston, who as a State Analyst and as the senior of the analysts engaged on the work of the Food and Drug section, has been closely in touch with the matters covered. I am in agreement with the report.

Yours faithfully,
FRANK E. CONNAH, Government Analyst.

GOVERNMENT CHEMICAL LABORATORY.

FOODS AND DRUGS SECTION.





Appendix C.

X-RAY AND OTHER ELECTRO MEDICAL EQUIPMENT ADVISORY BOARD.

This Board was constituted by Executive Minute of 1st May, 1935, and has met consistently throughout the financial year under review.

The membership is as follows:—

Sir Raphael West Cilento, Kt., M.D., B.S., D.T.M. & H., Director-General of Health and Medical Services, and Professor of Social and Tropical Medicine in the University of Queensland, who also acts as Chairman;

Valentine McDowall, M.B., Ch.M., Senior Radiologist and Senior Radium Therapeutist, Brisbane and South Coast Hospitals Board;

Arthur Boyd, B.E., D.Sc., M.I.E.E., Assoc. M.Inst.C.E., Lecturer in Mechanical and Electrical Engineering in the University of Queensland; and

George William Watson, M.V.O., Under Secretary, Chief Secretary's Department.

The functions and duties of the Board are defined in the Schedule attached to the notification of appointment.

In accordance with paragraph 3, it is the duty of the Board to furnish an annual report to the Minister upon its activities, and the following information is submitted:—

After considerable inquiry, the Board, in conjunction with the Department of Public Works, decided upon standard plans A and B as being suitable for the accommodation of small and large X-ray plants generally. The plans have been tested in practice and found entirely satisfactory. They are simple, they contain all necessary detail, and up to the present have been adequate to the accommodation of all types from the small mobile plant to the larger four valve plant, which represents the largest apparatus at present handled by the Board.

During the year, the following X-ray plants were approved; tenders were called and plants were installed by the successful tenderers:—

Childers, 30th June, 1936.

Maryborough, 14th April, 1937 (approved local purchase from Baker legacy account).

Surat, 10th July, 1936.

Atherton, 4th November, 1936.

Mundubbera, 14th January, 1937 (plant delivered November; installation delayed on account of absence of dark room).

Ayr, 8th October, 1936.

Augathella—finalised 20th May, 1937 (installation of the plant was somewhat delayed owing to the desire of the Board to postpone it until the pending change of medical officer had been effected).

Innisfail. (This plant was actually installed during the previous financial year, but owing to certain defects in operation, final approval was withheld by the Board.)

Emerald, 14th April, 1937 (purchase with approval of a second-hand plant after full enquiry).

Tenders were called and orders placed, but plants were not installed during the current financial year for Ipswich (14th April, 1937) and Bundaberg (14th April, 1937).

It is a condition of examination of tenders by the Board that apparatus must conform to accepted British standards and to Australian standards where such exist. As no such standards were available in connection with the Siemens' apparatus, arrangements were made by the firm, locally operating that series of plants, to have tests carried out by the National Physics Laboratory of the Commonwealth, established in Melbourne. Dr. C. S. Eddy, of that institution, at present has the matter in hand.

Arrangements for the transfer of plants by voluntary action were raised in connection with Atherton and Cloncurry, but in each instance the negotiations lapsed.

The Bundaberg and Beaudesert plants were reconditioned, and action is pending in respect of supplementary provision at Gayndah, and also at Nambour.

In several instances, to obviate inconvenience, emergency requests for X-ray tubes or other essential equipment were approved by the Chairman, and subsequently endorsed by the Board.

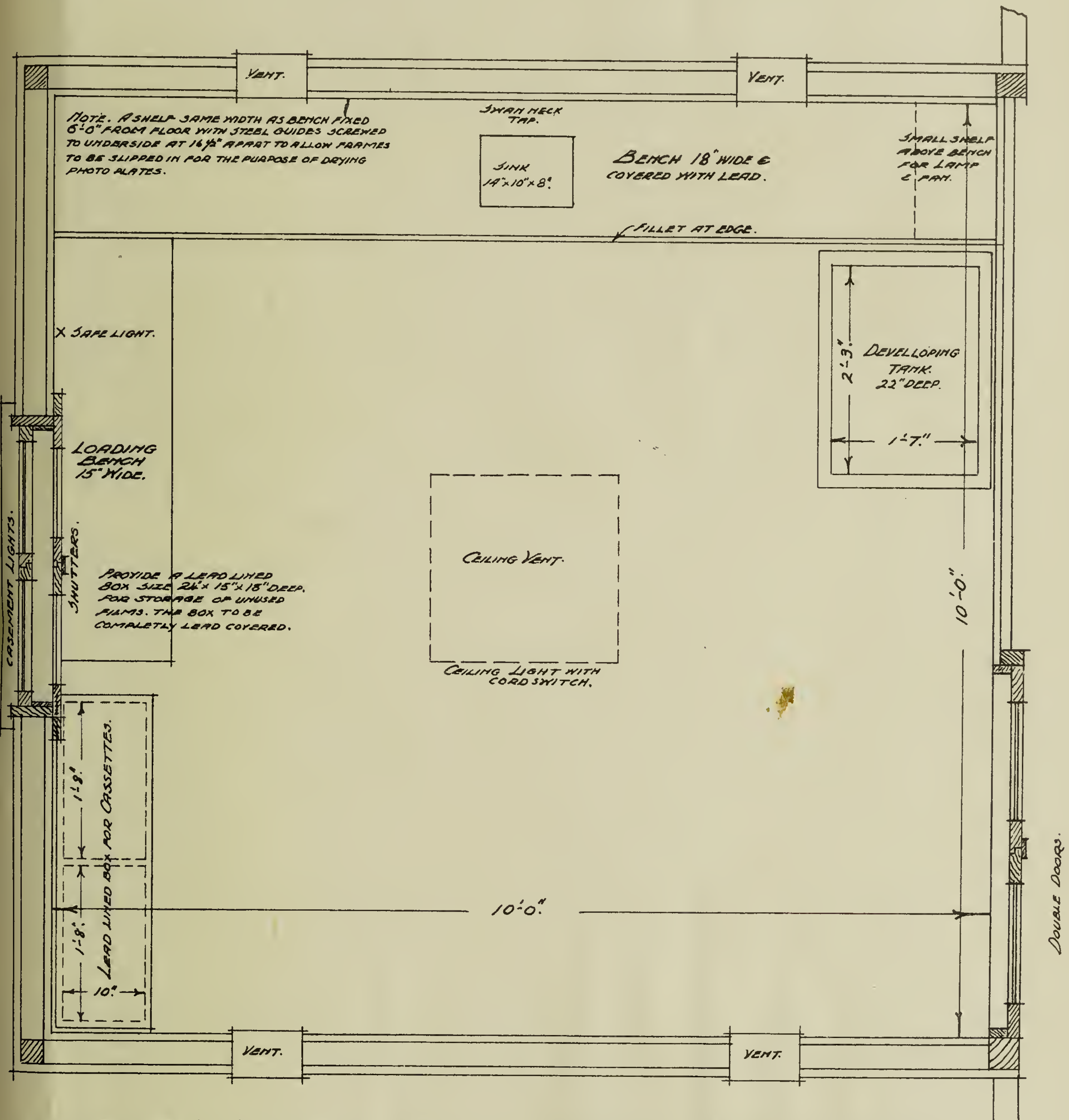
Minor improvements were effected at Mitchell by the Roma Hospitals Board, which controls that area. A faulty Bucky grid at Atherton was replaced by the tenderer, upon his attention being directed to it.

At the end of the financial year, applications for X-ray plants under consideration included representations from Brisbane, Monto, Richmond, Mount Morgan, Cardwell, Taroom, Mount Isa, Atherton, Wondai, Charters Towers, Proserpine, Rockhampton, and Cooktown.

In connection with diathermy apparatus, the Board reaffirms its feeling that there is a tendency to apply surgical diathermy to a degree that is unjustified. In the hands of men other than specialists, diathermy may actually be dangerous, and in cases of skin cancer, it is generally felt that where these cannot be treated by local application of carbon dioxide snow, it is preferable that patients should be referred to one of the larger centres for treatment, rather than that they should be treated in such a way that, while apparent cure results on the skin surface, actual occult growth may proceed to an unrecognised degree, and sometimes to a degree that hampers the ultimate cure of the case.

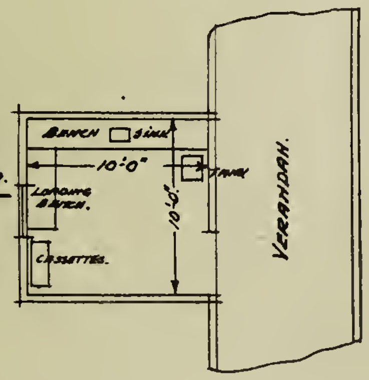
During the year the Board has given consideration to requests that it should act in a consultative capacity with regard to the diagnosis of doubtful films and also the inspection of films for faults in technique. A decision in this matter was deferred until a later date. If it is felt that it is possible to contribute in this way to the efficiency of routine working in connection with X-ray apparatus at hospitals, relevant action will be taken.

R. W. CILENTO.
V. McDOWALL.
A. BOYD.
G. W. WATSON.


VENT.
VENT.
NOTE. A SHELF SAME WIDTH AS BENCH FIXED 6'-0" FROM FLOOR WITH STEEL GUIDES SCREWED TO UNDERSIDE AT 16½" APART TO ALLOW FRAMES TO BE SLIPPED IN FOR THE PURPOSE OF DRYING PHOTO PLATES.
SWAN NECK TAP.
SINK 14"×10"×8".
BENCH 18" WIDE & COVERED WITH LEAD.
SMALL SHELF ABOVE BENCH FOR LAMP & FAN.
FILLET AT EDGE.
X SAFE LIGHT.
DEVELLOPING TANK. 22" DEEP.
2'-3".
1'-7".
LOADING BENCH 15" WIDE.
CASEMENT LIGHTS.
SHUTTERS.
PROVIDE A LEAD LINED BOX SIZE 24"× 15"× 18" DEEP. FOR STORAGE OF UNUSED FILMS. THE BOX TO BE COMPLETELY LEAD COVERED.
CEILING VENT.
CEILING LIGHT WITH CORD SWITCH.
10'-0".
1'-8".
1'-8".
LEAD LINED BOX FOR CASSETTES.
10".
10'-0".
DOUBLE DOORS.
VENT.
VENT.

PLAN OF TYPE No 1 FOR SMALL MOBILE UNIT & DARK ROOM BUILT OFF HOSPITAL VERANDAH.

KEY PLAN SHOWING POSITION OF X RAY ROOM IN RELATION TO HOSPITAL BUILDING.



SKETCH PLAN OF STANDARD TYPE
No 1 SMALL MOBILE UNIT X RAY DEPT.
1" & 1/8" TO 1 FOOT

E. A. GODFREY. NOV 1936.
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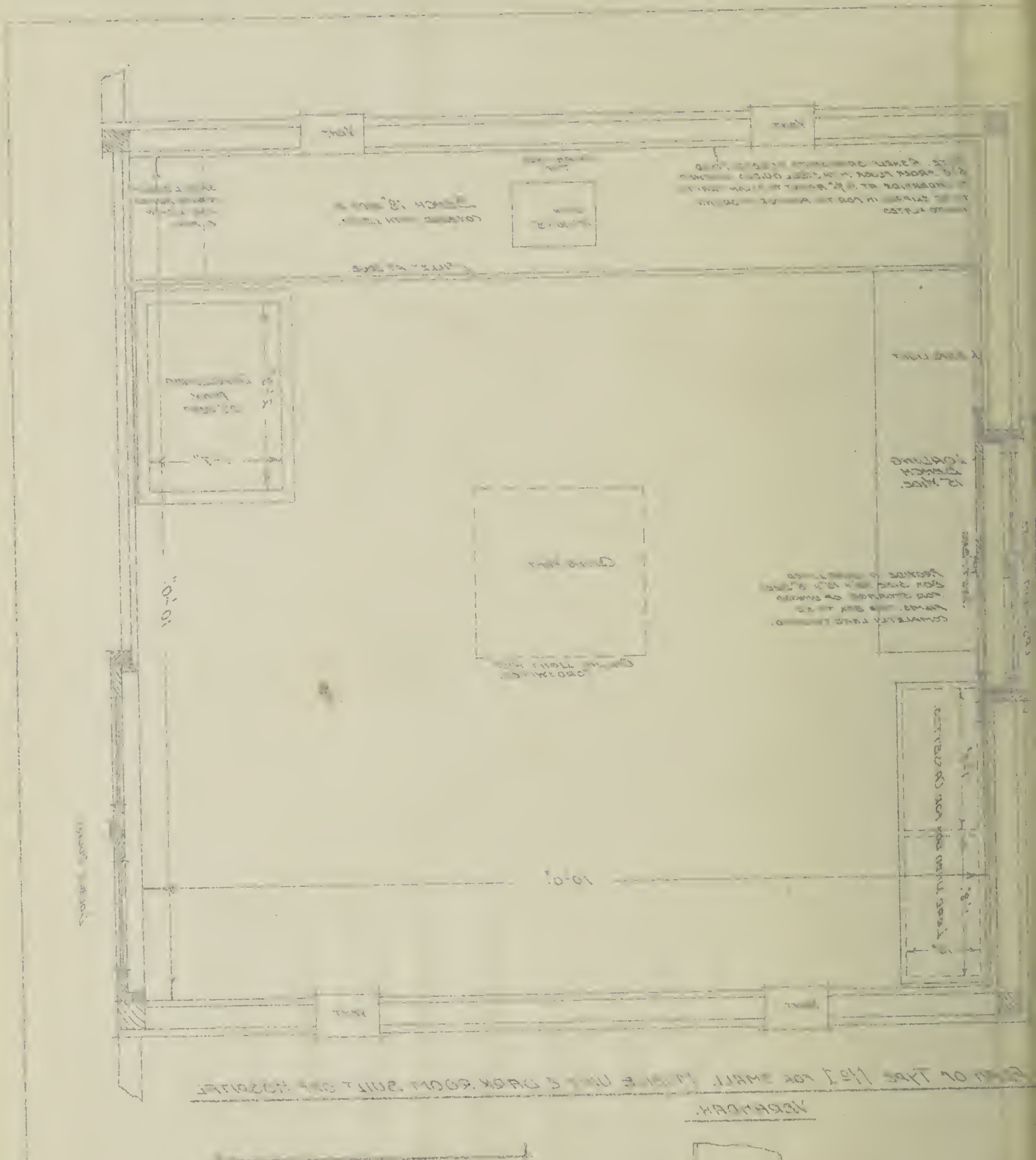
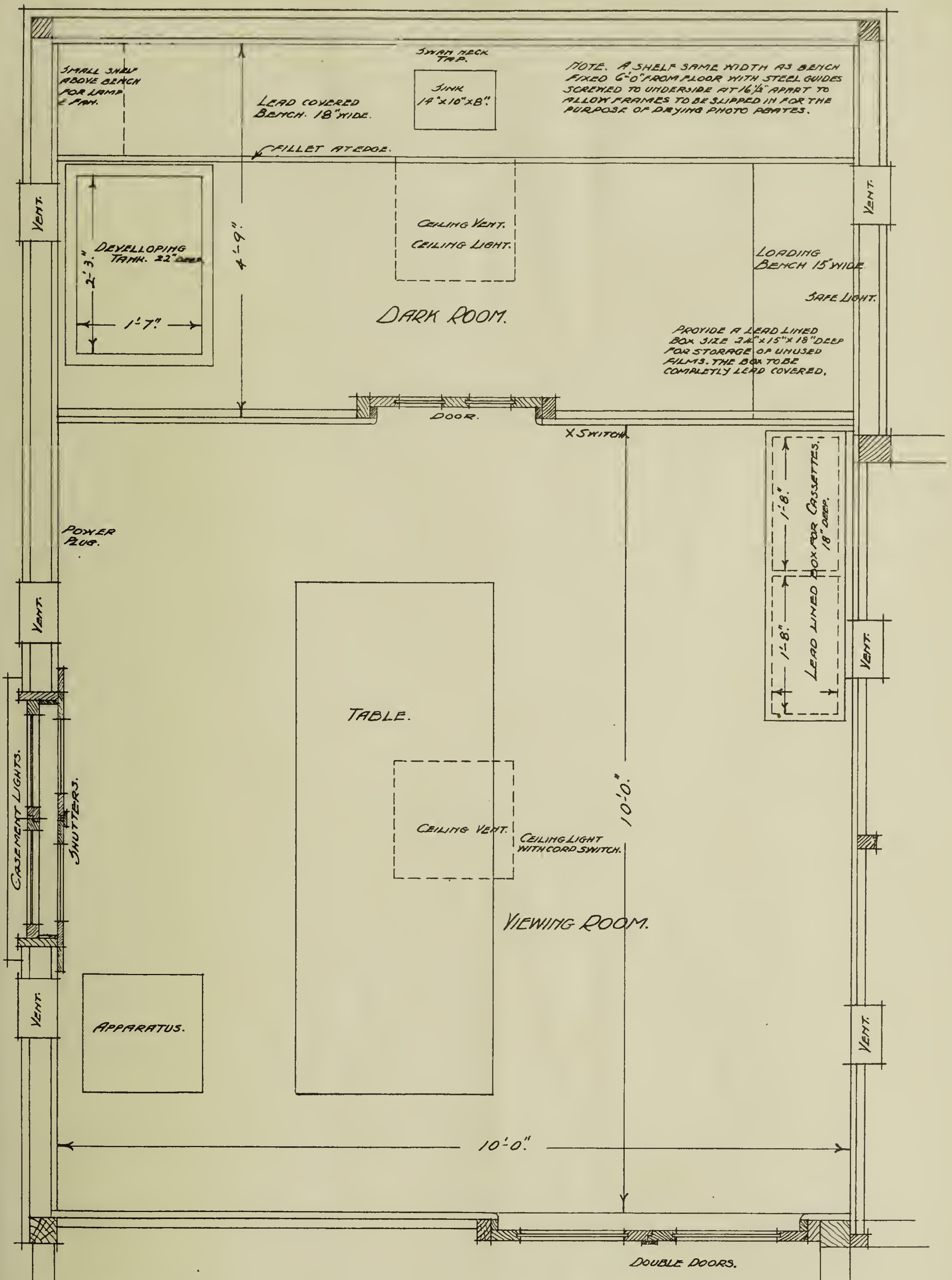
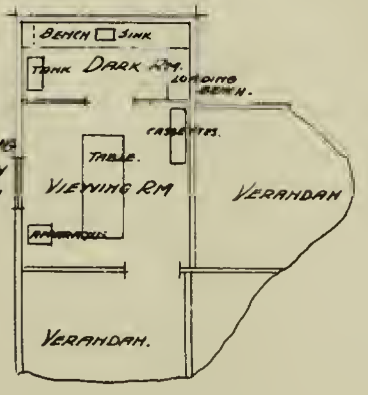



SMALL SHELF ABOVE BENCH FOR LAMP & FAN.
LEAD COVERED BENCH. 18" WIDE.
SWAN NECK TAP.
SINK 14"x10"x8".
NOTE. A SHELF SAME WIDTH AS BENCH FIXED 6'-0" FROM FLOOR WITH STEEL GUIDES SCREWED TO UNDERSIDE AT 16½" APART TO ALLOW FRAMES TO BE SLIPPED IN FOR THE PURPOSE OF DRYING PHOTO PLATES.
FILLET AT EDGE.
VENT.
DEVELLOPING TANK. 22" DEEP
2'-3".
1'-7".
4'-9".
CEILING VENT.
CEILING LIGHT.
DARK ROOM.
LOADING BENCH 15" WIDE.
SAFE LIGHT.
PROVIDE A LEAD LINED BOX SIZE 24"x15"x18" DEEP FOR STORAGE OF UNUSED FILMS. THE BOX TO BE COMPLETELY LEAD COVERED.
DOOR.
X SWITCH.
1'-8".
1'-8".
LEAD LINED BOX FOR CASSETTES, 18" DEEP.
POWER PLUG.
VENT.
TABLE.
CASEMENT LIGHTS.
SHUTTERS.
CEILING VENT.
CEILING LIGHT WITH CORD SWITCH.
10'-0".
VIEWING ROOM.
VENT.
APPARATUS.
VENT.
10'-0".
DOUBLE DOORS.

PLAN OF TYPE No 2 MOBILE UNIT VIEWING & DARK ROOM BUILT ON CORNER OF HOSPITAL VERANDAH.



KEY PLAN SHOWING POSITION OF X RAY ROOM IN RELATION TO HOSPITAL BUILDING.

SKETCH PLAN OF STANDARD TYPE No 2
MOBILE UNIT X RAY DEPARTMENT.
1" & ⅛" TO 1 FOOT.

E. A. GODFREY. NOV 1936

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Appendix D:

STATE NUTRITIONAL ADVISORY BOARD.

This Board was constituted by Executive Minute on 18th February, 1937. Membership is as follows:—

Sir Raphael West Cilento, Kt., M.D., B.S., D.T.M. and H., Director-General of Health and Medical Services; and Professor of Social and Tropical Medicine in the University of Queensland; who also acts as Chairman;

Edward Holbrook Derrick, M.D., Director, Division of Laboratories and Micro-biology;

Leslie St. Vincent Welch, L.R.C.P., M.R.C.S., Chief Medical Officer, Department of Public Instruction;

Aubrey David Dick Pye, M.B., Ch.M., F.R.C.S., F.R.A.C.S., General Medical Superintendent, Brisbane and South Coast Hospitals' Board;

Leon Alexander Meston, A.A.C.I., Senior Analyst, Department of the Government Analyst; and

Douglas Harry Kedgwin Lee, M.B., B.S., D.T.M., Professor of Physiology in the University of Queensland.

In paragraph (9) of the Schedule which outlines and defines the functions of the Board, it is stated that, with the approval of the Minister, members may be co-opted to this Board, and such approval having been obtained, the following members were co-opted:—

Paul Wanostrocht Mitchell, M.B., Ch.M., D.T.M., Chief Quarantine Officer (General), Department of Health for the Commonwealth; and

Clarence Murrell Cato, Acting Chief Inspector of Food and Drugs, Department of Health and Home Affairs, Queensland.

In accordance with paragraph 10 of the Schedule, it is the duty of the Board to furnish an annual report to the Minister upon its activities, and the following information is submitted:—

The inaugural meeting of the Board was held on Wednesday, 24th March. The Board meets only to discuss business of actual importance relating to activities which may come within the range of Government policy or question.

The chairman, in outlining the duties of the Board and welcoming members, stated that it would be observed that the functions of the Board having been defined by an Executive Minute of a wide and inclusive nature, the duty of members was to seek the best means of putting into effect the important responsibilities with which they had been charged.

Prior to the establishment of the State Board, the Commonwealth had set up an Advisory Council on Nutrition and had requested the University of Queensland to appoint from its staff a delegate for this State. It happened that this delegate was the Director-General of Health and Medical Services, who was appointed in his capacity as Professor-designate of Social and Tropical Medicine.

The Minister for Health and Home Affairs, however, considering the important obligations that rested upon the Government in respect of the domestic welfare of the people and the paramount authority of the Department in all questions on nutrition involving the expenditure of funds derived from taxation, decided to appoint a State Nutritional Advisory Board as above. He approached the Commonwealth of Australia, intimating that the Board, being the only Board that could be recognised by the Queensland Government, might be recognised by the Commonwealth as representing also the Commonwealth Advisory Council on Nutrition locally.

At the same time Government officers who were members of the Queensland Nutrition Council (an unofficial body) were notified that they should sever that connection, not as any mark of conflict or disagreement, but because it was not consistent with their status that members of the Government services should become members of a council whose policy might from time to time be unacceptable to the Government with resulting embarrassment.

It was obvious that the State Nutritional Advisory Board might undertake responsibilities which no unofficial body had authority to undertake, but insofar as general circumstances were concerned, co-operation was offered to any unofficial bodies engaged in relevant investigation or approved propaganda.

At the first meeting, the matter of a standard loaf for Queensland was undertaken as a major activity, and represented two problems—one in respect of composition and the other with regard to legislation, or any proposed amendment of existing legislation. At this meeting a deputation from the Master Bakers' Association of Queensland waited upon the Board.

With a view to securing definition as to proposed standards, it was first suggested that any loaf, other than the standard loaf (white or brown), should bear a label setting out its composition, its weight, and its price, and that, in particular, considering the existence of a Price Fixing Commission, some decision should be arrived at as to whether variations in weight or variations in price should be sought where loaves were permitted to depart from the standards decided upon. An arrangement had for some time existed, whereby for administrative purposes, certain fancy loaves had been exempted from the provisions as to weight laid down by the Food and Drugs Regulations of 1927 and Section 107 of the Health Acts, 1900 to 1936.

At a later stage, the Board was instructed that the Minister had decided that no variations in weight would be permitted.

Confidential consideration was given to the question of the diet of the aboriginal, and this matter remains under discussion. Attention is being given to the question in respect of the diet of the aboriginal in his native states, in settlements close to towns, and in church and governmental settlements.

The matter of the availability of goat milk was discussed by the Board, and it was agreed that the goat was of the greatest value as a source of fresh milk to children in the far west of the State. The control and care of goats being a matter for which local authorities had full power under the Local Government Act, a memorandum was prepared and circulated to all local authorities concerned. Several have replied, appreciating the action taken, and indicating what steps are pursued for the betterment of the stock, and the more efficient safeguarding of the milk.

With regard to diet sheets generally, representations were made by one college students' club, and a criticism of the diet provided was forwarded after due consideration. It was agreed that in order to prevent any possible variance in advice distributed from the official and unofficial bodies respectively, no diet sheet should be issued by any of them without reference to the State Nutritional Advisory Board. Unfortunately, this arrangement was overlooked in connection with a faulty menu card issued shortly afterwards by the unofficial body, but the situation has been corrected to a large extent by modifications and corrections in successive issues.

Representations with regard to calcium capacity and other aspects of skim milk in Queensland were referred to the attention of the Minister for Agriculture and Stock with a view to determining whether he might consider any further enquiry into the matter desirable, and, in particular, whether it was possible to increase the general utilisation of such milk. This matter is under discussion with that Department. It might be imagined that, since this milk is sold at approximately 1d. per gallon for pig food, it might be of greater value for children on a deficient milk ration, if available. It is suggested that it comes ultimately to consumption by Queenslanders, but the great mass of calcium is lost in the bones of locally consumed pigs, and a very considerable proportion of all Queensland's pigs, &c., are bred for export abroad, and thus they are lost to the State as food.

The question of bread standards was actively pursued by reference to the Departments of Health in various Australian States and to the Commonwealth, and a considerable mass of information was forwarded by these authorities. The matter is still under discussion.

Representations were also received as to the desirability of instituting measures for improving the nutrition of mothers and children by a greater supply of milk. The Board was of the opinion that the scheme was idealistic and hardly practicable, and that, moreover, the experience quoted in support from English sources was based upon a problem that presented itself there in a form entirely different from the social problems of Australia and from a population class of which we had only rare examples in Queensland. Very close attention had been given to the matter in New South Wales, and the Commonwealth had also discussed it without arriving at any conclusion other than a recognition of the extraordinary complexity and difficulty of any attempted milk distribution.

Moreover, in Queensland, provision was made by means of the basic wage (which was based, itself, upon an analysis of many articles of foodstuffs *inter alia*) to meet the requirements of the Queensland worker, and these bases having been established effectively, it was considered unwise that representations should be made along the channel represented by the State Nutritional Advisory Board unless with the approval of the authorities controlling these indices.

The Board expressed itself as being willing and anxious to undertake any investigation in that regard or in respect of the whole matter of the sufficiency of available diet, should the Government instruct it so to do. It had from the first been in close touch with investigations undertaken by the Commonwealth Advisory Council on Nutrition which will be complete in August, 1937, and upon the findings resulting from the analysis of the records received, it will be possible to determine whether or not such an enquiry is likely to result in material of importance being made available.

Definite experimental work had also been done in Queensland in connection with the distribution of milk at Rockhampton and at South Brisbane, but the attempt had been entirely unsatisfactory, both from the point of view of distribution and also from that of cost.

Reference was also made to the "mechanical cow," where excellent milk had been provided to children, but where the scheme had failed completely when the novelty had worn off.

It was decided that for the present the important thing was to assist the education of the public towards a greater consumption of milk, recognising that an attempt to introduce any ambitious scheme of milk distribution at a time when the price of milk was an extremely controversial subject, would be a matter of doubtful wisdom.

Owing to the constitution of the Board late in the financial year, the matters of aboriginal diets, the better utilisation of skim milk and the improvement of bread standards, were carried forward.

For the Board,
RAPHAEL W. CILENTO,
Chairman.

ANNUAL REPORT

OF THE

INSPECTOR OF HOSPITALS FOR THE INSANE

FOR

1936-37.

Including the Rockville Epileptic Home, Willowburn.

Information Contained in the Report of the Inspector of Hospitals for the Insane for the Year 1936-37.

SIR,—I have the honour, in compliance with section 60 of "*The Insanity Act of* 1884," to present a report on the State Hospitals for the Insane and the Townsville Reception House in Queensland for the twelve months from 1st July, 1936, to 30th June, 1937.

HOSPITAL FOR THE INSANE, GOODNA.

—				Males.	Females.	Total.
Number of patients in residence in the Hospital on 1st July, 1936				994	623	1,617
Number on leave of absence on 1st July, 1936				11	10	21
Total on the books of the Hospital on 1st July, 1936				1,005	633	1,638
Admissions, including readmissions and transfers, during the twelve months ending 30th June, 1937				280	213	493
Total on books and under treatment during twelve months				1,285	846	2,131
	Males.	Females.	Total.			
Discharged and transferred	149	99	248			
Died	121	72	193			
Total discharges, transfers, and deaths				270	171	441
Remaining on the books of the Hospital on 30th June, 1937				1,015	675	1,690
Number on leave of absence on 30th June, 1937				5	26	31
Number of patients in residence in the Hospital on 30th June, 1937				1,010	649	1,659
Average number daily resident during the twelve months				1,041	647	1,688

The following table gives the number of patients in residence at this hospital at the end of each year for the past twenty-eight and a-half years, together with the daily average and the total number under treatment for each year respectively. The period 1926-27 is for eighteen months, while the following periods are each for twelve months ending on 30th June each year:—

Year.	In Residence at the end of each year.	Daily Average Resident during each year.	On Books and under Treatment during each Year.		
			Total Number.	Increase.	Decrease.
1909	1,214	1,199	1,561	..	..
1910	1,247	1,270	1,558	..	3
1911	1,229	1,264	1,626	68	..
1912	1,268	1,253	1,625	..	1
1913	1,313	1,303	1,672	47	..
1914	1,381	1,363	1,767	95	..
1915	1,340	1,368	1,755	..	12
1916	1,397	1,399	1,763	8	..
1917	1,395	1,436	1,807	44	..
1918	1,283	1,430	1,770	..	37
1919	1,353	1,337	1,740	..	30
1920	1,388	1,381	1,792	52	..
1921	1,358	1,383	1,810	18	..
1922	1,437	1,424	1,852	42	..
1923	1,352	1,379	1,914	62	..
1924	1,323	1,357	1,812	..	102
1925	1,368	1,390	1,756	..	56
1926–27 (18 months)	1,428	1,422	2,014	258	..
1927–28 (12 months)	1,438	1,462	1,864	..	150
1928–29 (12 months)	1,481	1,492	1,852	..	12
1929–30 (12 months)	1,499	1,526	1,903	51	..
1930–31 (12 months)	1,511	1,535	1,893	..	10
1931–32 (12 months)	1,563	1,578	1,968	75	..
1932–33 (12 months)	1,601	1,602	2,026	58	..
1933–34 (12 months)	1,571	1,625	2,104	78	..
1934–35 (12 months)	1,624	1,636	2,135	31	..
1935–36 (12 months)	1,607	1,660	2,149	14	..
1936–37 (12 months)	1,659	1,688	2,131	..	18

Admissions.

The following table gives an analysis of the admissions—viz., admissions for the first time, readmissions and admissions by transfer—for each year for the past twenty-eight and a-half years, together with the totals for the whole of this period. The period *1926-27 is for eighteen months:—

Year.	Admissions.			Readmissions.			Transfers.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1909 ..	181	90	271	24	15	39	..	..	..	205	105	310
1910 ..	177	92	269	30	12	42	..	..	..	207	104	311
1911 ..	199	99	298	31	16	47	..	..	..	230	115	345
1912 ..	206	109	315	33	23	56	1	..	1	240	132	372
1913 ..	196	114	310	32	38	70	3	1	4	231	153	384
1914 ..	240	145	385	33	21	54	1	1	2	274	167	441
1915 ..	190	107	297	38	23	61	..	..	..	228	130	358
1916 ..	220	108	328	31	34	65	1	..	1	252	142	394
1917 ..	180	116	296	40	33	73	..	1	1	220	150	370
1918 ..	191	122	313	29	31	60	1	1	2	221	154	375
1919 ..	227	133	360	28	34	62	1	..	1	256	167	423
1920 ..	215	112	327	43	34	77	..	3	3	258	149	407
1921 ..	184	128	312	40	33	73	..	2	2	224	163	387
1922 ..	244	134	378	42	44	86	1	3	4	287	181	468
1923 ..	230	140	370	30	29	59	1	2	3	261	171	432
1924 ..	219	125	344	40	30	70	2	3	5	261	158	419
1925 ..	202	113	315	47	40	87	1	..	1	250	153	403
1926-27*	304	168	472	72	59	131	4	2	6	380	229	609
1927-28 ..	203	127	330	41	40	81	..	..	..	244	167	411
1928-29 ..	194	114	308	40	45	85	..	4	4	234	163	397
1929-30 ..	207	119	326	40	40	80	1	1	2	248	160	408
1930-31 ..	168	121	289	46	37	83	2	2	4	216	160	376
1931-32 ..	221	122	343	49	42	91	1	..	1	271	164	435
1932-33 ..	183	146	329	50	44	94	1	1	2	234	191	425
1933-34 ..	208	166	374	54	41	95	..	2	2	262	209	471
1934-35 ..	280	151	431	42	59	101	1	1	2	323	211	534
1935-36 ..	225	161	386	53	43	96	..	3	3	278	207	485
1936-37 ..	223	151	374	54	60	114	3	2	5	280	213	493
Total for past 28½ years ..	5,917	3,533	9,450	1,132	1,000	2,132	26	35	61	7,075	4,568	11,643

* This period is for 18 months.

Bodily Health of Patients on Admission.

The following table shows the bodily condition of patients on admission. Table 1 is compiled on the results of the medical examination of each patient's physical condition immediately on admission, or as soon as it is possible to make such an examination. The period 1926-27 is for eighteen months ending on 30th June; all other periods before this time end on 30th

December, and are for the twelve calendar months, while those subsequent to this period are for twelve months ending on 30th June:—

No. 1 TABLE.

Year.	In Good Health.			In Indifferent Health.			In Bad Health.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
1909..	51	22	73	111	56	167	43	27	70
1910..	67	24	91	61	32	93	79	48	127
1911..	46	22	68	54	48	102	130	45	175
1912..	40	16	56	66	49	115	133	67	200
1913..	51	18	69	95	47	142	82	87	169
1914..	92	48	140	71	52	123	110	66	176
1915..	55	21	76	70	47	117	103	62	165
1916..	74	40	114	99	44	143	78	58	136
1917..	68	38	106	83	63	146	69	48	117
1918..	58	41	99	87	63	150	75	49	124
1919..	78	71	149	103	50	153	74	46	120
1920..	68	30	98	80	48	128	110	68	178
1921..	65	47	112	98	73	171	61	41	102
1922..	47	42	89	115	67	182	124	69	193
1923..	32	51	83	129	51	180	99	67	166
1924..	43	31	74	99	81	180	117	43	160
1925..	23	25	48	124	84	208	102	44	146
1926-27	70	76	146	156	95	251	150	56	206
1927-28	57	62	119	118	60	178	69	45	114
1928-29	51	51	102	89	57	146	94	51	145
1929-30	60	54	114	85	68	153	102	37	139
1930-31	76	61	137	75	56	131	63	41	104
1931-32	69	49	118	100	59	160	101	56	157
1932-33	68	65	133	80	71	151	85	54	137
1933-34	83	73	156	98	79	177	81	55	136
1934-35	95	72	167	113	85	198	114	53	167
1935-36	81	68	149	108	85	193	89	51	140
1936-37	124	101	225	83	70	153	70	40	110
Totals for past 28½ years—	1792	1319	3111	2650	1740	4390	2607	1474	4081

DISCHARGED RECOVERED.

The following tables show the number of recoveries and the recovery rate per cent. for each year respectively during the past twenty-eight and a-half years, together with the total number of recoveries and the recovery rate for the whole of the above period collectively. The period 1926-27 is for eighteen months:—

TABLE No. 1—RECOVERIES.

Year.	Males.	Females.	Total.
1909	68	38	106
1910	90	45	135
1911	106	66	172
1912	85	72	157
1913	112	71	183
1914	131	79	210
1915	103	73	176
1916	99	90	189
1917	104	72	176
1918	86	87	173
1919	86	88	174
1920	118	87	205
1921	110	81	191
1922	115	82	197
1923	139	98	237
1924	125	93	218
1925	93	83	176
1926-27 (18 months)	161	103	264
1927-28 (12 months)	111	97	208
1928-29 (12 months)	110	77	187
1929-30 (12 months)	107	81	188
1930-31 (12 months)	95	71	166
1931-32 (12 months)	103	84	187
1932-33 (12 months)	96	80	176
1933-34 (12 months)	132	81	213
1934-35 (12 months)	123	94	217
1935-36 (12 months)	141	104	245
1936-37 (12 months)	125	79	204
Total Recoveries for past 28½ years	3,074	2,256	5,330

TABLE No. 2—RECOVERY RATES ON THE ADMISSIONS.

Year.	Males.	Females.	Total
1909	33·17	38·19	34·19
1910	43·43	43·27	43·41
1911	46·09	57·39	49·85
1912	35·56	54·54	42·31
1913	49·12	46·71	48·15
1914	47·98	47·59	47·83
1915	45·17	56·15	49·16
1916	39·14	63·38	48·09
1917	47·27	48·32	47·69
1918	39·09	56·86	46·38
1919	33·82	52·69	41·23
1920	45·73	59·59	50·74
1921	49·17	50·31	49·60
1922	40·21	46·06	42·45
1923	53·66	57·98	55·37
1924	48·26	60·00	52·65
1925	37·35	54·24	43·78
1926-27 (18 months)	42·81	45·37	43·78
1927-28 (12 months)	45·49	58·08	50·61
1928-29 (12 months)	47·00	48·42	47·58
1929-30 (12 months)	43·32	50·94	46·31
1930-31 (12 months)	44·39	44·93	44·62
1931-32 (12 months)	38·15	51·21	43·09
1932-33 (12 months)	41·18	42·10	41·61
1933-34 (12 months)	50·38	39·13	45·41
1934-35 (12 months)	38·19	44·76	40·78
1935–36 (12 months)	50·71	50·98	50·83
1936-37 (12 months)	45·12	37·44	41·80
Recovery rate for past 28½ years	43·60	49·76	46·01

DEATHS.

The death rates for the past twenty-eight and a-half years, respectively, were as follows:—

Year.	Males.	Females.	Total.
1909	8·88	5·80	7·69
1910	9·76	7·74	8·98
1911	8·90	7·53	8·38
1912	11·46	7·46	10·05
1913	8·54	9·34	8·82
1914	8·33	12·63	9·83
1915	8·30	12·78	9·56
1916	7·96	6·01	7·29
1917	6·10	6·59	6·26
1918	8·10	8·11	8·11
1919	9·37	7·9	8·96
1920	8·91	9·69	9·19
1921	10·46	8·48	9·90
1922	9·99	8·95	9·62
1923	8·05	9·65	8·62
1924	10·42	10·31	10·39
1925	8·89	9·67	9·13
1926–27 (18 months)	15·78	13·63	15·11
1927–28 (12 months)	8·52	13·41	10·12
1928–29 (12 months)	8·51	8·51	8·51
1929–30 (12 months)	11·05	8·59	10·22
1930–31 (12 months)	7·53	10·07	8·40
1931–32 (12 months)	10·24	8·65	9·71
1932–33 (12 months)	10·44	6·69	9·11
1933–34 (12 months)	10·90	11·53	11·14
1934–35 (12 months)	10·70	7·65	9·53
1935–36 (12 months)	10·73	9·42	10·24
1936–37 (12 months)	11·62	11·12	11·43

WASSERMANN TESTS.

Wassermann tests have been carried out, as in previous years, by the Health Department Laboratory on blood specimens from all the patients admitted during the past twelve months ending on 30th June, 1937. The results obtained were as follows:—Decidedly positive reactions, 23 males, 16 females, total 39; positive, 5 males, 6 females, total 11; slightly positive, 7 males, 16 females, total 23; very slightly positive, 8 males, 3 females, total 11. The total number of patients showing some positive Wassermann reaction was 43 males, 41 females, total 84. The percentage of positive Wassermann's to the admissions was as follows:—

——	Males.	Females.	Total.
Decidedly positive	8·30	7·58	7·99
Positive	1·80	2·84	2·25
Slightly positive	2·52	7·58	4·71
Very slightly positive . .	2·88	1·42	2·25
On all degrees of positive reaction	15·52	19·43	17·21

General Paralysis of the Insane.

——	M.	F.	Total.	M.	F.	Total.
Remaining on the 1st July, 1936 . .				21	. .	21
Admitted during 12 months ending 30th June, 1937				11	1	12
Total under treatment during 1936-37				32	1	33
Discharged or transferred during 1936-37	2	. .	2			
Died during 1936-37 . .	10	. .	10			
Total discharged, transferred, and died during 12 months ending 30th June, 1937				12	. .	12
Remaining on 30th June, 1937				20	1	21
Percentage of general paralytics under treatment to total number of patients under treatment during 1936–37				2·49	0·11	1·54
Percentage of general paralytics remaining to number of patients remaining on books on 30th June, 1937				1·97	0·14	1·24
Percentage of general paralytics admitted during 1936-37				3·97	0·47	2·45

Epileptic Patients.

——	M.	F.	Total	M.	F.	Total.
Remaining on 1st July, 1936				87	58	145
Admitted in the year				14	12	26
Admitted by transfer				1	1	2
Total under treatment during 12 months ended 30th June, 1937				102	71	173
Discharged during 1936–37	8	5	13			
Transferred during 1936–37	2	. .	2			
Died during 1936–37 . .	17	3	20			
Total discharged, transferred, and died during 1936–37				27	8	35
Remaining on 30th June, 1937				75	63	138
Percentage of epileptics under treatment to total number of patients under treatment during 1936-37				7·93	8·39	8·11
Percentage of epileptics remaining on books to number of patients remaining on books on 30th June, 1937				7·38	9·33	8·16
Percentage of epileptics admitted				5·05	5·68	5·32

Returned Soldiers.

(Red Cross Society.)

The following table shows the number of returned soldiers who have been certified as insane and admitted to Goodna—A, during the past twelve months; B, from the commencement of the war up to 30th June, 1937:—

Table A.

—	Admitted.	Readmitted.	Transferred.	Previously Admitted prior to the War.	Total Admitted.	Dis-charged. Recovered.	Dis-charged. Relieved or not Improved.	Transferred.	Died.	Remaining.
From active service	21	6	1	. .	28	11	. .	. .	1	16
From abroad, but who have not seen active service	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
From camp . .	1	. .	. .	. .	1	. .	. .	. .	. .	1
Total for 1936-7	22	6	1	. .	29	11	. .	. .	1	17

Table B.

—	Admitted.	Readmitted.	Transferred.	Previously Admitted prior to the War.	Total Admitted.	Dis-charged. Recovered.	Dis-charged. Relieved or not Improved.	Transferred.	Died.	Remaining.
From active service	512	66	1	10	589	322	3	56	99	109
From abroad, but who have not seen active service	4	. .	. .	1	5	2	. .	. .	. .	3
From camp . .	15	. .	. .	2	17	10	. .	. .	1	6
Total . .	531	66	1	13	611	334	3	56	100	118

Accommodation.

The following table gives the cubic space for each dormitory in all the wards of this hospital, together with the space per bed in cubic feet for 1936-37:—

No. of Ward.	No. of Dormitory.	Total Capacity in cubic feet in each Dormitory.	Cubic feet per Patient in each Dormitory in 1935–36.	Cubic feet per Patient in each Dormitory in 1936-37.
	Male Division.			
1	1	6,648	511	554
	2	21,720	1,034	943
	3*	8,658	509	787
2† . .	1	17,376	914	868
3	1	7,140	510	510
	2	15,786	493	493
	3*	8,658	509	577
4	1	17,616	880	970
	2	15,606	1,419	1,419
	3	17,616	979	880
	4	3,467	138	133
	5*	13,950	734	996

* Veranda (open-air) Dormitories.

† Admission Ward.

No. of Ward.	No. of Dormitory.	Total Capacity in cubic feet in each Dormitory.	Cubic feet per Patient in each Dormitory in 1935-36.	Cubic feet per Patient in each Dormitory in 1936-37.
Male Division—continued.				
5	1	5,040	504	630
	2	20,640	737	711
6	1	10,720	714	714
	2	10,720	714	714
7	1	10,720	714	765
	2	10,720	714	714
8‡ ..	1	17,868	992	893
	2	17,868	..	2,552
9	1	36,828	920	877
	2	11,520	823	768
10	1	36,828	898	944
	2	11,520	960	823
11	1	19,440	1,023	972
	2	19,440	883	845
	3	27,648	768	1,105
	4	19,440	925	845
	5*	6,624	828	828
	6*	6,624	946	828
12	1	36,828	944	856
	2	11,520	960	886
13	1	36,828	920	856
	2	11,520	886	823
14§ ..	..	..	..	..
15‖ ..	1	15,810	832	790
Farm Ward	1	13,789	811	725
Hospital ..	1	10,416	1,157	1,157
	2	3,565	1,188	1,188
	3	4,420	736	884
Female Division.				
1	1	23,979	380	393
2	1	20,282	751	751
	2	4,320	392	360
	3	4,320	360	360
	4*	1,848	308	264
3	1	18,432	392	361
	2	7,728	429	515
	3*	9,744	487	573
	4*	1,440	240	240
4	1	11,724	509	469
	2	11,724	468	419
5	1	19,311	341	306
	2	3,224	230	161
	3	3,224	179	140
6	1	24,419	542	542
	2	7,863	655	655
	3*	9,229	576	439
7	1	8,273	393	689
	2	4,400	366	231
8	1*	8,064	288	237
Hospital ..	1	10,416	1,041	1,041
	2	3,565	1,188	1,188
	3*	4,420	736	736

* Veranda (open-air) Dormitories.
‡ Admission Ward for quiet recoverable patients.
§ Refractory Ward, with all single rooms and no dormitory.
‖ Epileptic Ward.

MAGISTERIAL INQUIRIES.

One magisterial inquiry was held during the past twelve months, concerning the sudden death of a male patient. The post mortem examination was performed by Dr. Derrick, Director of the Laboratory section of the Health Department. The cause of death was pneumonia.

DEPORTEES.

No patients were deported during the year.

BIRTHS.

No birth took place in the hospital during the twelve months ending on 30th June, 1937.

ESCAPEES.

During the twelve months ending on the 30th June, 1937, four male and one female patient escaped; of these, two were recaptured on the same day, while the remaining two were recaptured on the following day.

RETURNED SOLDIERS.

(Red Cross Society.)

As in previous years, the above society have forwarded regular supplies of tobacco and cigarette papers for the benefit of these patients. A special delivery of puddings, cake, and fruit was made by the society at Christmas.

OCCUPATIONAL THERAPY.

Besides having a fancy needle room which provides useful occupation for the female patients, we have the men's new workshop, where male patients are engaged and capable of performing various types of handy arts and crafts.

AMUSEMENTS.

For the benefit of the patients dances are held during the winter months, and these are enjoyed to the utmost by those who participate in them. The dancing season, as in previous years, is concluded by a grand "finale" termed the Patients' Fancy Dress Ball. Talking pictures are screened fortnightly in the winter months and weekly in the summer months, and this class of entertainment is received with much enthusiasm by the patients who view them.

RELIGIOUS SERVICES.

The different religious denominations held their services regularly in the recreation hall, and are attended by patients who have wished to avail themselves of the opportunity to attend. The Roman Catholic patients, as has been the practice in previous years, attend their church in the Goodna township.

The clergy of the various religious bodies pay periodical as well as special visits to the patients in the institution whenever required, and on such occasions have always displayed much sympathy towards the patient visited.

FARM AND GARDEN PRODUCE.

The following table shows the quantities of vegetables and farm produce grown at the Institution for each of the past fifteen years :—

Year ending—	Vegetables.				Farm Produce.																	
					Chaff.				Maize.				Ensilage.	Green Feed.	Potatoes.				Pumpkins and Turnips.			
	Tons	cwt.	qr.	lb.	Tons	cwt.	qr.	lb.	Tons	cwt.	qr.	lb.	Tons.	Tons.	Tons	cwt.	qr.	lb.	Tons	cwt.	qr.	lb.
30th June, 1923 ..	124	8	1	17	90	2	3	16	37	14	0	9	140	201½	13	13	1	3	11	14	1	2
30th June, 1924 ..	140	6	0	13	68	3	0	2	14	13	0	12	184	51½	3	9	1	27	10	17	2	0
30th June, 1925 ..	151	10	3	27	51	9	2	3	20	18	0	6	48	28	12	17	2	8	6	6	0	0
30th June, 1926 ..	136	18	0	19	117	0	2	25	21	8	3	15	125	230	9	14	3	18		..		
30th June, 1927 ..	146	2	3	4	147	5	2	1	12	13	1	18	106	109	10	14	3	4	3	8	0	0
30th June, 1928 ..	144	8	0	18	71	15	1	2	11	19	3	9	79	159	20	1	3	19		..		
30th June, 1929 ..	142	2	2	12	81	11	0	4	31	12	3	24	70	206½		..				..		
30th June, 1930 ..	151	16	3	17	133	11	3	6	29	5	2	21	..	140	0	11	3	10	4	8	1	0
30th June, 1931 ..	123	6	0	13	100	12	2	5	23	4	3	0	..	395		..			11	18	1	28
30th June, 1932 ..	155	17	0	11	123	3	3	13	21	19	3	7	57	49		..			18	4	0	10
30th June, 1933 ..	152	6	0	14	106	4	3	11	21	11	3	2	9	364	10	15	3	0	23	14	3	10
30th June, 1934 ..	121	18	0	10	78	6	0	5	27	11	0	4	63	610½	22	1	1	4	14	13	0	22
30th June, 1935 ..	128	4	2	21	56	2	2	21	58	11	2	0	..	867	27	2	0	4	25	3	3	2
30th June, 1936 ..	100	10	0	18	58	8	3	12	32	12	0	20	6	604	23	18	0	15	18	0	2	16
30th June, 1937 ..	75	19	2	5	54	18	1	16	11	1	0	18	120	236	23	14	2	18	14	0	1	4

EXPENDITURE TABLE.

(Average number of Patients daily resident during twelve months, 1,688.)

	£	s.	d.
Total expenditure	104,237	1	9
Maintenance collected by Curator	17,655	5	4
Sales	948	7	3
Net expenditure	85,633	9	2
Gross cost per patient for twelve months	61	15	0
Net cost per patient for twelve months	50	14	7
Gross cost per patient per week	1	3	9
Net cost per patient per week	0	19	6

Table I.—Goodna.

ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS DURING THE YEAR ENDING 30TH JUNE, 1937.

				Males.	Females.	Total.
On the books of the Hospital on 1st July, 1936				1,005	633	1,638
	Males.	Females.	Total.			
Admitted for the first time during the year	223	151	374			
Readmitted during the year	54	60	114			
Transferred from Toowoomba during the year	3	2	5			
Transferred from Ipswich during the year	..	..	..	280	213	493
Total under care during the year				1,285	846	2,131
Discharged, died, transferred—						
Discharged recovered	125	79	204			
relieved	6	3	9			
not improved	1	1	2			
Transferred to Toowoomba	2	15	17			
Transferred to Ipswich	15	1	16			
Died	121	72	193			
Total discharged, died, &c., during the year				270	171	441
Remaining on the books of the Hospital on 30th June, 1937				1,015	675	1,690
Average number daily resident during the year				1,041	647	1,688
On leave of absence on 30th June, 1937				5	26	31

Table II.—Goodna.

ADMISSIONS, DISCHARGES, AND DEATHS, WITH THE PROPORTIONS OF RECOVERIES AND DEATHS PER CENT., DURING THE YEAR ENDING 30TH JUNE, 1937.

Admitted.			Readmitted			DISCHARGED.									Died.			Remaining on 30th June, 1937.			Average Number Daily Resident.			Percentage of Recoveries on Admissions.			Percentage of Patients Relieved.			Percentage of Deaths on Average Number Resident.		
						Recovered.			Relieved.			Not Improved.																				
Males	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
223	151	374	54	60	114	125	79	204	6	3	9	1	1	2	121	72	193	1,015	675	1,690	1,041	647	1,688	45·12	37·44	41·80	2·16	2·84	1·84	11 62	11·12	11·43

Table III.—Goodna.

CAUSES OF INSANITY IN THE PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

Causes of Insanity.	PREDISPOSING.			EXCITING.			TOTAL.		
	Males.	Females	Total.	Males.	Females	Total.	Males.	Females	Total.
Moral—									
Domestic trouble and bereavement	..	..	..	4	9	13	4	9	13
Business worries	..	..	..	4	4	8	4	4	8
Mental anxiety and overwork	..	..	..	..	1	1	..	1	1
Fright and shock	..	..	..	..	..	..	..	..	..
Isolation and loneliness	..	..	..	2	..	2	2	..	2
War	..	..	..	3	..	3	3	..	3
Love affairs	..	..	..	2	1	3	2	1	3
Religious excitement	..	..	..	..	1	1	..	1	1
Physical—									
Alcohol	..	..	..	22	2	24	22	2	24
Drugs	..	..	..	2	..	2	2	..	2
Accident or injury	..	..	..	2	..	2	2	..	2
Puerperal	..	..	..	..	1	1	..	1	1
Influenza	..	..	..	..	1	1	..	1	1
Other fevers	..	..	..	..	..	..	..	..	..
Diseases of brain and skull	..	..	..	..	..	..	..	..	..
General paralysis of the insane	..	..	..	11	1	12	11	1	12
Syphilis	..	..	..	14	2	16	14	2	16
Other bodily diseases	..	..	..	..	..	..	..	..	..
Heredity	57	58	115	..	..	..	57	58	115
Previous attacks	46	66	112	..	..	..	46	66	112
Climacteric	..	..	..	..	..	..	..	..	..
Senility	41	28	69	..	..	..	41	28	69
Epilepsy (acquired)	..	..	..	8	10	18	8	10	18
Congenital without epilepsy	18	13	31	..	..	..	18	13	31
Congenital with epilepsy	3	1	4	..	..	..	3	1	4
Not ascertained	..	..	..	..	..	..	67	37	104
Bodily Ill-health	..	..	..	..	..	..	29	11	40

Table IV.—Goodna.

CAUSES OF DEATHS DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

Causes.	Males.	Females.	Total.
General Diseases—			
Carcinoma	1	..	1
Enteric Fever	2	6	8
Influenza	1	1	2
Diseases of the Nervous System—			
Exhaustion of mania	6	3	9
Exhaustion of melancholia	5	5	10
Exhaustion psychosis	1	2	3
Cerebral hæmorrhage	4	2	6
Chronic cortical atrophy	..	..	..
Epilepsy	4	1	5
Status epilepticus	..	..	..
General paralysis of the insane	10	..	10
Meningitis	..	..	..
Imbecility and Idiocy	9	..	9
Dementia præcox	4	..	4
Tabo paresis	1	..	1
Hydrocephalus	..	..	..
Diseases of the Circulatory System—			
Fatty degeneration of heart	1	..	1
Valvular disease of heart	..	..	..
Coronary Thrombosis	..	..	..
Myocarditis	6	..	6
Endocarditis	..	..	..
Arterio-sclerosis	5	..	5
Phlebitis	..	..	..
Anæmia	1	..	1
Auricular fibrillation	1	..	1
Diseases of the Respiratory System—			
Lobar pneumonia	5	3	8
Broncho-pneumonia	3	4	7
Pulmonary tuberculosis	2	..	2
Pulmonary bronchitis	2	2	4
Pulmonary gangrene	..	..	..
Tubercular Laryngitis	1	..	1
Diseases of the Digestive System—			
Colitis	2	16	18
Gastro enteritis	2	1	3
Strangulated hernia	..	..	..
Diseases of the Genito-Urinary System—			
Chronic nephritis	1	..	1
Pyelo nephritis	..	..	..
Pyelitis	..	..	..
Osteo myelitis	..	..	..
Diabetes Millitus	2	..	2
Mammary abscess	1	..	1
Senile decay	36	23	59
Septicæmia	1	1	2
Suicide	1	..	1
Injury	..	2	2
Totals	121	72	193

Table V.—Goodna.

LENGTH OF RESIDENCE IN THE HOSPITAL OF THE PATIENTS WHO WERE DISCHARGED OR WHO DIED DURING THE YEAR AND OF THOSE WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1937.

Length of Residence.	Discharges.						Deaths.			Remaining.		
	Recovered.			Relieved and not improved.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 1 month	2	. .	2	2	2	4	14	10	24	19	14	33
1 month and under 3 months	27	15	42	2	. .	2	12	13	25	24	27	51
3 months and under 6 months	27	22	49	. .	1	1	17	8	25	37	36	73
6 months and under 9 months	25	13	38	. .	. .	. .	10	5	15	34	39	73
9 months and under 12 months	11	5	16	. .	1	1	3	3	6	33	26	59
1 year and under 2 years . .	15	17	32	. .	. .	. .	13	12	25	92	75	167
2 years and under 3 years . .	9	5	14	2	. .	2	7	5	12	94	57	151
3 years and under 5 years . .	2	2	4	. .	. .	. .	12	5	17	98	98	196
5 years and under 7 years . .	2	. .	2	. .	. .	. .	5	4	9	91	63	154
7 years and under 10 years . .	2	. .	2	. .	. .	. .	5	1	6	96	71	167
10 years and under 12 years . .	1	. .	1	. .	. .	. .	. .	1	1	69	29	98
12 years and under 15 years . .	1	. .	1	. .	. .	. .	4	. .	4	67	44	111
15 years and under 20 years . .	1	. .	1	. .	. .	. .	5	. .	5	88	45	133
20 years and over	. .	. .	. .	1	. .	1	14	5	19	173	51	224
Totals	125	79	204	7	4	11	121	72	193	1,015	675	1,690

Table VI.—Goodna.

AGES OF THE PATIENTS WHOSE ADMISSIONS, DISCHARGES, AND DEATHS OCCURRED DURING THE YEAR, AND OF THOSE WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1937.

Ages.	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not improved.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 5 years	1	. .	1	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .
5 years and under 10 years . .	1	2	3	. .	. .	. .	. .	. .	. .	. .	. .	. .	. .	3	3
10 years and under 15 years . .	3	2	5	. .	. .	. .	1	. .	1	1	. .	1	9	2	11
15 years and under 20 years . .	16	10	26	10	3	13	. .	. .	. .	3	2	5	17	17	34
20 years and under 30 years . .	48	34	82	23	16	39	1	. .	1	6	2	8	109	80	189
30 years and under 40 years . .	54	49	103	28	23	51	1	1	2	12	9	21	193	163	356
40 years and under 50 years . .	53	41	94	26	16	42	. .	3	3	18	12	30	224	172	396
50 years and under 60 years . .	34	29	63	15	12	27	. .	. .	. .	19	12	31	192	101	293
60 years and under 70 years . .	28	22	50	14	6	20	3	. .	3	23	12	35	129	75	204
70 years and under 80 years . .	25	16	41	6	3	9	. .	. .	. .	25	16	41	113	50	163
80 years and under 90 years . .	11	5	16	2	. .	2	1	. .	1	13	5	18	20	7	27
90 years and under 100 years . .	. .	1	1	. .	. .	. .	. .	. .	. .	1	1	2	4	. .	4
Unknown	3	. .	3	1	. .	1	. .	. .	. .	. .	1	1	5	5	10
Totals	277	211	488	125	79	204	7	4	11	121	72	193	1,015	675	1,690

Table VII.—Goodna.

CONDITION AS TO MARRIAGE OF THE PATIENTS WHOSE ADMISSIONS, DISCHARGES, AND DEATHS OCCURRED DURING THE YEAR, AND OF THOSE WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1937.

Condition as regards Marriage.	Admissions.			Discharges.						Deaths.			Remaining.		
				Recovered.			Relieved and not improved.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Single	171	79	250	90	32	122	4	1	5	62	17	79	736	355	1,091
Married	80	96	176	27	39	66	3	3	6	38	30	68	219	240	459
Widowed	18	34	52	5	8	13	. .	. .	. .	18	24	42	36	71	107
Divorced	1	. .	1	. .	. .	. .	. .	. .	. .	1	. .	1	3	1	4
Unknown	7	2	9	3	. .	3	. .	. .	. .	2	1	3	21	8	29
Totals	277	211	488	125	79	204	7	4	11	121	72	193	1,015	675	1,690

Table VIII.—Goodna.

BIRTHPLACES OF PATIENTS IN THE HOSPITAL DURING THE YEAR ENDING 30TH JUNE, 1937.

Birthplace.	Admissions.			Remaining on 30th June, 1937.		
	Males.	Females.	Total.	Males.	Females.	Total.
Australasia—						
New South Wales	30	10	40	51	35	86
Victoria	13	5	18	41	14	55
Queensland	121	147	268	578	459	1,037
Queensland (Aboriginal)	..	2	2	..	9	9
South Australia	3	..	3	5	..	5
Western Australia	1	..	1	3	..	3
Tasmania	3	..	3	4	..	4
New Zealand	1	..	1	6	3	9
Northern Territory	1	..	1	1	..	1
United Kingdom—						
England	35	22	57	113	75	188
Wales	4	1	5	5	1	6
Scotland	9	2	11	44	13	57
Ireland	20	10	30	71	33	104
Other British Possessions—						
India	..	..	..	5	2	7
Ceylon	..	..	..	..	..	..
Canada	..	..	..	1	..	1
South Africa	2	..	2	2	..	2
Cyprus	..	..	..	..	..	..
Malta	..	..	..	2	..	2
West Indies	..	..	..	..	..	..
European Foreign Countries—						
Austria	..	..	..	3	..	3
Germany	2	1	3	15	6	21
France	1	..	1	2	1	3
Denmark	..	1	1	4	2	6
Holland	..	..	..	..	..	..
Norway	..	..	..	4	1	5
Sweden	2	..	2	4	..	4
Russia	2	1	3	4	2	6
Switzerland	1	1	2	1	1	2
Spain	..	..	..	..	..	..
Portugal	..	..	..	1	..	1
Italy	3	..	3	5	2	7
Greece	2	..	2	5	..	5
Other European Countries	5	2	7	6	2	8
Other Foreign Countries—						
China	..	..	..	1	..	1
Japan	..	..	..	..	..	..
United States of America and Phillipine Islands	..	1	1	4	4	8
Palestine	..	1	1	..	2	2
Syria	1	..	1	1	..	1
Polynesia	..	..	..	..	..	..
At Sea	1	..	1	2	..	2
Unknown	14	4	18	21	8	29
Totals	277	211	488	1,015	675	1,690

Table IX.—Goodna.

FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

Form of Mental Disorder.	Males.	Females.	Total.
Manic Depresive Insanity—			
Acute delirious mania	3	..	3
Acute mania	10	8	18
Simple mania	9	7	16
Chronic mania	..	1	1
Recurrent mania	4	10	14
Acute melancholia	2	5	7
Simple melancholia	17	11	28
Melancholia agitans	1	6	7
Hypochondriacal melancholia	..	1	1
Delusional melancholia	3	1	4
Resistive melancholia	2	2	4
Stuporose melancholia	7	2	9
Chronic melancholia	..	2	2
Recurrent melancholia	4	3	7
Alternating insanity	1	5	6
Recurrent insanity	6	9	15
Anergic stupor	..	..	..
Acute confusional and exhaustion psychosis	16	12	28
Alcholic Insanities—			
Mania à potu	2	..	2
Alcoholic insanity	14	..	14
Alcoholic paranoia	..	..	..
Alcoholic dementia	1	..	1
Polyneuritis Psychosis	..	1	1
Paranoia	4	5	9
Paraphrenia	31	19	50
Schizophrenia	54	41	95
General paralysis of the insane	11	1	12
Cerebro spinal syphilis	..	1	1
Chronic cortical atrophy	5	4	9
Secondary dementia	3	4	7
Senile dementia	38	26	64
Epilepsy (acquired)	8	10	18
Congenital with epilepsy	3	1	4
Congenital without epilepsy	18	13	31
Endocrinal psychoses	..	..	..
Totals	277	211	488

Table X.—Goodna.

BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

Bodily Condition.	Males.	Females.	Total.
In apparently good health and condition	124	101	225
In indifferent health and reduced condition	83	70	153
In bad health and exhausted condition	70	40	110
Totals	277	211	488

Table XI.—Goodna.

PREVIOUS OCCUPATIONS OF PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

Occupations.	Number.	Occupations.	Number.	Occupations.	Number.
Males.		*Males—continued.*		*Males—continued.*	
Baker	3	Librarian	1	Wharf Labourer	1
Bookbinder	1	Medical Practitioner	1	Wood Chopper	1
Boot Finisher	1	Milk Vendor	2	Nil	9
Bullock Driver	1	Miner	2	Unknown	8
Butcher	1	Motor Mechanic	1		
Cabinet Maker	3	Navvy	2	Total	277
Canecutter	1	Painter	3		
Carpenter	8	Packer	1		
Carrier	1	Pensioner	19		
Chemist	3	Plumber	2		
Child	2	Policeman	2		
Clerk	8	Property Owner	1	*Females.*	
Draughtsman	1	Prospector	2		
Drover	1	Railway Employee	3	Clerk	1
Engine Driver	1	Relief Worker	10	Cook	2
Engineer	2	Saddler	1	Domestic	95
Farmer	24	Salesman	1	Dressmaker	3
Farm Hand	13	Schoolboy	1	Governess	1
Fettler	2	School Teacher	1	Housewife	79
Fisherman	2	Seaman	5	Music Teacher	1
Forest Hand	1	Shearer	2	Nurse	1
Gardener	1	Shop Assistant	2	Pensioner	7
Hairdresser	1	Station Hand	4	Physical Culture Teacher	1
Hotelkeeper	1	Stockman	2	Shop Assistant	1
Hotel Yardman	1	Stonemason	1	School Teacher	1
Insurance Agent	1	Storekeeper	3	Typist	2
Inventor	1	Student	1	Child	3
Iron Moulder	2	Tinsmith	1	Nil	11
Iron Turner	1	Tool Sharpener	1	Unknown	2
Jeweller	1	Truck Driver	1		
Journalist	1	Upholsterer	1	Total	211
Labourer	86	Watchmaker	1		

Table XII.—Goodna.

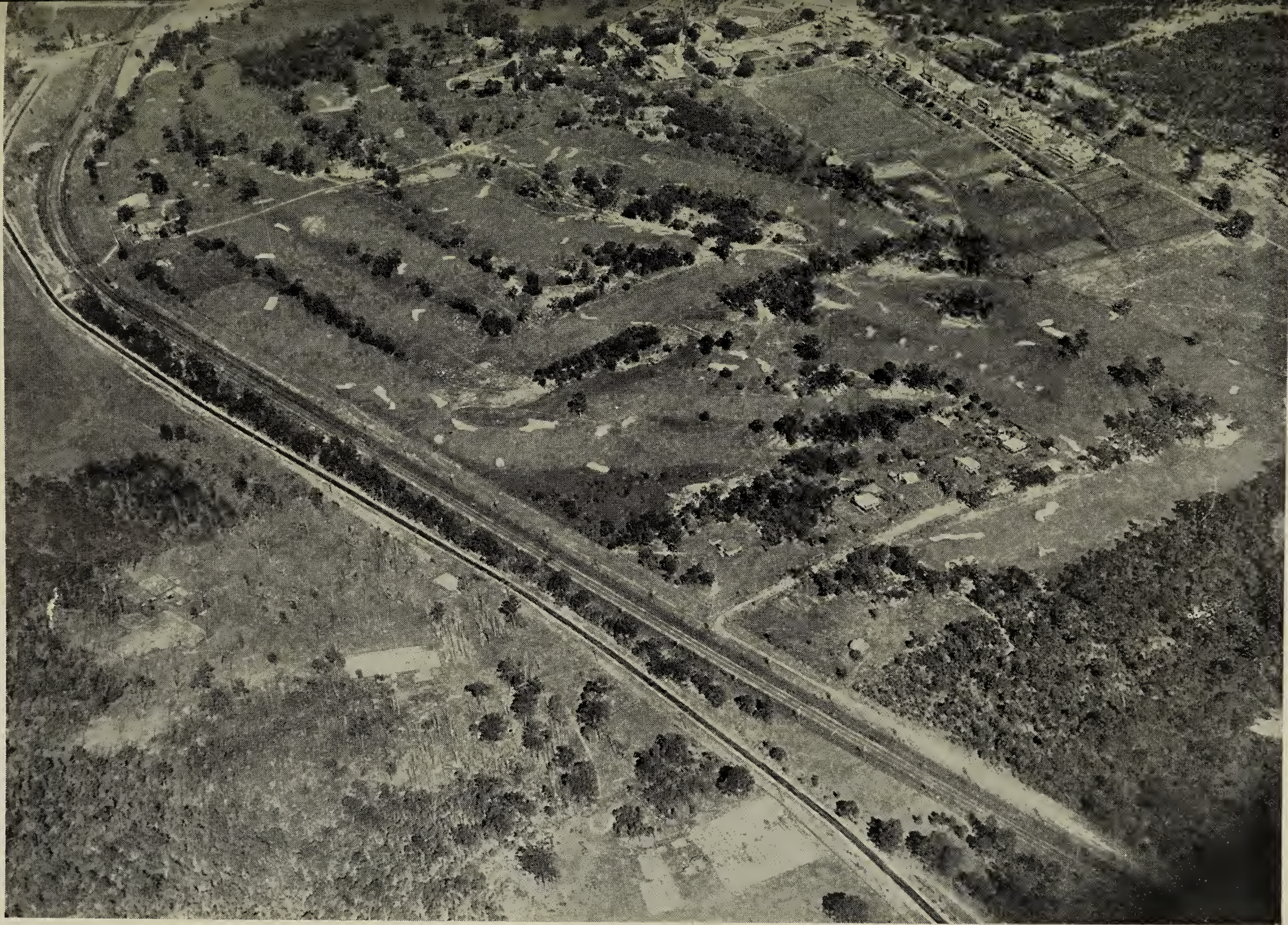
DISTRICTS WHENCE PATIENTS WERE RECEIVED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

Districts.	Males.	Females.	Total.
Northern and North-Western Districts	41	16	57
Central Districts	22	16	38
Southern and South-Western Districts	214	179	393
Totals	277	211	488

Table XIII.—Goodna.

ARTICLES MADE UP IN THE WORKROOM DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

Articles.	Number.	Articles.	Number.
Aprons	208	Lavatory bags	11
Bed bags	2	Pudding cloths	3
Blinds	16	Pyjama coats	129
Bloomers	10	Pyjama suits	67
Bonnets	3	Pyjama trousers	109
Chair top covers	11	Quilts	83
Children's coats	6	Rompers	7
Combinations	1,457	Serviettes	6
Covers, bed pan	1	Sheets, calico	3,456
Curtains	12	Sheets, waterproof	356
Cushion covers	11	Shifts	375
Doctors' caps	36	Shirts, flannel	1,879
Drawers	39	Shirts, harvard	47
Dresses	1,857	Shrouds	108
Dressing gowns	5	Shroud bags	1
Fever gowns	4	Slip bodices	2
Jackets	313	Sterilizing bags	4
Milk jug covers	7	Tablecloths	598
Mosquito nets	231	Table covers	55
Nightgowns	509	Teabags	12
Overalls	3	Tea cosies	2
Petticoats	217	Ticks	435
Pillow cases	183	Tablerunners	78
Pillow shams	54	Towels, huckaback	3,265
Pillow slips	2,258	Towels, kitchen	240
Kimono	1	Vests	55



AERIAL VIEW—MENTAL HOSPITAL, GOODNA.

HOSPITAL FOR THE INSANE, TOOWOOMBA.

—				Males.	Females.	Total.
Number of patients in residence at the Hospital on 1st July, 1936				551	588	1,139
Number on leave of absence on 1st July, 1936				12	20	32
Total on the books of the Hospital on 1st July, 1936				563	608	1,171
Admissions, including readmissions and transfers, during twelve months ending 30th June, 1937				57	52	109
Total on books and under treatment during twelve months ..				620	660	1,280
	Males.	Females.	Total.			
Discharged and transferred	32	27	59			
Died	29	29	58			
Total discharges, transfers, and deaths				61	56	117
Remaining on the books of the Hospital on 30th June, 1937				559	604	1,163
Number on leave of absence on 30th June, 1937				9	16	25
Number in residence at the Hospital on 30th June, 1937				550	588	1,138
Average number daily resident during the twelve months				550	580	1,130

Below is a table showing the number of admissions, readmissions, and transfers to this Hospital for each of the past twenty-eight and a-half years respectively :—

Year.	ADMISSIONS.			READMISSIONS.			TRANSFERS.			TOTAL.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1909	42	16	58	6	1	7	5	13	18	53	30	83
1910	42	22	64	10	4	14	1	..	1	53	26	79
1911	52	22	74	5	4	9	6	31	37	63	57	120
1912	46	19	65	8	1	9	3	2	5	57	22	79
1913	48	17	65	6	2	8	12	14	26	66	33	99
1914	42	25	67	9	5	14	..	..	..	51	30	81
1915	38	20	58	6	7	13	11	..	11	55	27	82
1916	39	19	58	11	10	21	..	1	1	50	30	80
1917	35	19	54	9	10	19		20	20	44	49	93
1918	37	22	59	6	2	8	..	100	100	43	124	167
1919	43	17	60	7	9	16	20	1	21	70	27	97
1920	50	29	79	10	5	15	..	1	1	60	35	95
1921	39	25	64	4	1	5	14	47	61	57	73	130
1922	32	27	59	7	3	10	..	2	2	39	32	71
1923	49	25	74	6	4	10	123	1	124	178	30	208
1924	43	31	74	5	4	9	10	60	70	58	95	153
1925	41	27	68	9	3	12	12	6	18	62	36	98
1926-27* ..	51	50	101	3	8	11	19	12	31	73	70	143
1927–28† ..	30	16	46	4	5	9	15	10	25	49	31	80
1928–29† ..	50	33	83	11	7	18	..	3	3	61	43	104
1929–30† ...	37	33	70	6	4	10	11	1	12	54	38	92
1930–31† ..	42	28	70	1	4	5	24	22	46	67	54	121
1931–32† ..	43	32	75	1	1	2	..	3	3	44	36	80
1932–33† ..	39	30	69	5	..	5	31	11	42	75	41	116
1933–34† ..	44	42	86	3	1	4	12	27	39	59	70	129
1934–35† ..	41	34	75	7	6	13	31	21	52	79	61	140
1935–36† ..	42	31	73	10	3	13	1	48	49	53	82	135
1936–37 ..	43	27	70	12	10	22	2	15	17	57	52	109
Totals for past 28½ years	1,180	738	1,918	187	124	311	363	472	835	1,730	1,334	3,064

* This period is for 18 months.

† This period is for 12 months.

The following table gives the number in residence in this hospital at the end of each year for the past twenty-eight and a-half years respectively, together with the daily average and the total number under treatment for the same periods; also the increase or decrease in the total number under treatment for each year respectively :—

Year.	In Residence at the end of each Year.	Daily Average Resident during each Year.	On Books and under Treatment during each Year.		
			Total Number.	Increase.	Decrease.
1909	734	737	816	..	..
1910	723	746	819	3	..
1911	748	751	847	28	..
1912	738	755	841	..	6
1913	732	751	843	2	..
1914	729	754	835	..	8
1915	723	751	859	24	..
1916	722	749	826	..	32
1917	748	759	841	15	..
1918	836	772	936	95	..
1919	840	874	956	20	..
1920	845	870	965	9	..
1921	880	911	1,001	36	..
1922	870	882	990	..	11
1923	989	978	1,118	128	..
1924	1,057	1,034	1,179	61	..
1925	1,058	1,051	1,197	18	..
1926-27*	1,050	1,056	1,255	58	..
1927-28†	1,066	1,039	1,179	..	76
1928-29†	1,052	1,036	1,215	36	..
1929-30†	1,040	1,051	1,173	..	42
1930-31†	1,089	1,072	1,190	17	..
1931-32†	1,067	1,081	1,198	8	..
1932-33†	1,067	1,073	1,215	17	..
1933-34†	1,086	1,078	1,228	13	..
1934-35†	1,115	1,095	1,258	30	..
1935-36†	1,139	1,138	1,282	24	..
1936-37	1,138	1,130	1,280	..	2

* This period is for 18 months.

† These periods are for twelve months.

DISCHARGED RECOVERED.

The following tables show the number of recoveries and the recovery rate for each year respectively for the past twenty-eight and a-half years, together with the total recoveries and the total recovery rates for the above whole period :—

TABLE NO. 1—RECOVERIES.

Year.	Males.	Females.	Total.
1909	21	12	33
1910	22	8	30
1911	31	11	42
1912	28	11	39
1913	26	8	34
1914	20	14	34
1915	25	11	36
1916	16	16	32
1917	21	10	31
1918	15	14	29
1919	15	9	24
1920	23	8	31
1921	15	11	26
1922	19	10	29
1923	24	12	36
1924	17	10	27
1925	20	12	32
1926–27—18 months	26	24	50
1927–28—12 ,,	12	9	21
1928–29—12 ,,	21	11	32
1929–30—12 ,,	21	17	38
1930–31—12 ,,	24	11	35
1931–32—12 ,,	28	17	45
1932–33—12 ,,	22	9	31
1933–34—12 ,,	12	24	36
1934–35—12 ,,	17	15	32
1935–36—12 ,,	26	18	44
1936–37—12 ,,	20	20	40
Total recoveries for past 28½ years	587	362	949

TABLE NO. 2—RECOVERY RATES ON THE ADMISSION AND READMISSIONS.

Year.	Males.	Females.	Total.
1909	43·75	70·58	50·70
1910	42·30	30·80	38·46
1911	52·72	42·30	49·38
1912	51·85	55·00	52·70
1913	48·14	36·84	46·57
1914	39·21	46·60	41·97
1915	56·81	40·74	50·70
1916	32·00	55·18	40·50
1917	47·73	34·48	42·47
1918	34·88	58·33	42·27
1919	30·00	34·62	31·58
1920	38·33	23·53	32·98
1921	34·88	42·30	37·68
1922	48·72	33·33	42·03
1923	43·63	41·38	42·86
1924	35·42	28·57	32·53
1925	40·00	40·00	40·00
1926–27*	48·15	41·38	44·64
1927–28—12 months	35·29	47·37	38·18
1928–29—12 ,,	34·45	27·5	31·68
1929–30—12 ,,	48·35	45·94	47·5
1930–31—12 ,,	55·8	34·37	46·6
1931–32—12 ,,	63·63	51.51	58·44
1932–33—12 ,,	50·00	30·00	41·88
1933–34—12 ,,	25·53	55·81	40·00
1934–35—12 ,,	35·41	37·50	36·36
1935–36—12 ,,	50·00	52·97	51·16
1936–37—12 ,,	36·36	54·05	43·47
Recovery rate for past 28½ years	42·94	41·99	42·57

* The period 1926–27 is for 18 months.

CAUSES OF DEATHS.

The following table shows the death rates per cent., based on the average number resident in this hospital, for each year respectively during the past twenty-seven and a-half years:—

Year.	Males.	Females.	Total.
1909	3·95	3·59	3·80
1910	5·22	4·68	4·94
1911	5·24	4·86	5·06
1912	6·57	3·71	5·17
1913	8·20	2·68	5·45
1914	3·71	4·34	3·97
1915	4·72	6·18	5·46
1916	4·92	4·68	4·81
1917	4·09	2·98	3·56
1918	3·56	4·75	4·14
1919	7·82	5·64	6·63
1920	4·38	5·01	4·71
1921	4·71	5·54	5·15
1922	4·53	3·88	4·19
1923	5·04	3·02	4·09
1924	4·29	3·20	3·77
1925	4·27	3·11	3·71
1926–7*	9·46	6·18	7·86
1927–8—12 months	3·74	3·56	3·65
1928–9—12 „	6·03	4·94	5·40
1929–30–12 „	5·31	4·80	5·10
1930–31–12 „	2·10	2·36	2·33
1931–32–12 „	4·49	2·47	3·51
1932–33—12 „	5·79	5·75	5·77
1933–34—12 „	4·34	4·37	4·35
1934–35—12 „	6·83	5·19	6·02
1935–36—12 „	5·10	2·93	4·03

* 1926–27 is for the period of 18 months ending 30th June, 1927.

WASSERMANN TEST.

Wassermann tests were carried out by the Health Department's Laboratory in Toowoomba on blood specimens submitted from 53 males, 36 females, total 89 patients out of the 55 males, 37 females, total 92 patients, admitted and readmitted during the past year.

The details of the Wassermann tests were as follows:—

—	Males.	Females.	Total.
Decidedly positive	1	..	1
Positive	..	..	..
Slightly positive	1	..	1
Total all degrees of positive re-actions	2	..	2
Percentage of all degrees of positive re-actions to admissions	3·64	..	2·17

GENERAL PARALYSIS OF THE INSANE.

—	Males.	Females	Total.
Remaining on 1st July, 1936 ..	4	..	4
Admitted during twelve months ..	1	..	1
Total under treatment during twelve months	5	..	5
Discharged or Transferred during 12 months	1	..	1
Died during twelve months ..	..	..	..
Remaining on 30th June, 1937 ..	4	..	4
Percentage of general paralytics to total number under treatment	0·80	..	0·39
Percentage of general paralytics remaining to number of patients remaining on 30th June, 1937	0·71	..	0·34
Percentage of general paralytics admitted in 1936-37	1·81	..	1·08

EPILEPTIC PATIENTS.

—	M.	F.	Total.
Remaining on 1st July, 1936 ..	53	58	111
Admitted during twelve months ..	3	1	4
Transferred from Goodna	..	..	..
Total under treatment during twelve months ending 30th June, 1937	56	59	115
Total discharged, transferred, and died	5	9	14
Remaining on 30th June, 1937 ..	51	50	101
Percentage of epileptics under treatment to total number under treatment	9·03	8·93	8·98
Percentage of epileptics remaining to total number remaining on 30th June, 1936	9·12	8·29	8·68
Percentage of epileptics admitted	5·45	2·70	4·34

	M.	F.	Total.
Discharged ..	4	3	7
Transferred ..	..	..	..
Died	1	6	7

RETURNED SOLDIER PATIENTS.

The following tables show the number of returned soldiers who have been certified as insane and admitted or transferred from another mental hospital in this State to Toowoomba—A, during the past twelve months; B, from the commencement of the war up to 30th June, 1937:—

TABLE A.

—	Admitted.	Transferred from Goodna.	Discharged or Transfd.	Died.	Remaining.
Returned soldier patients	5	..	3	1	1

TABLE B.

—	Admitted.	Transferred from Goodna.	Discharged.	Died.	Remaining.
Returned soldier patients	131	13	88	10	46

Accommodation.

No. of Ward.	No. of Dormitory.	Total Capacity in cubic feet in each Dormitory.	Cubic feet per Patient in each Dormitory.		No. of Ward.	No. of Dormitory.	Total Capacity in cubic feet in each Dormitory.	Cubic feet per Patient in each Dormitory.	
			1935-36.	1936-37.				1935-36.	1936-37.
	Male Division.					*Female Division.*			
A ..	1	15,678	669	559	1.. ..	1	15,678	721	603
	2	15,678	614	603		2	15,678	570	627
	3	15,678	526	603		3	15,678	712	627
	4	2,160	720	720		4	1,770	..	590
	5	11,040	1,380	1,380		5	1,678	..	559
B ..	1	16,926	725	995		6	11,040	1,521	1,577
	2	16,926	723	677	2.. ..	1	16,926	817	846
	3	15,606	65	624		2	16,926	817	846
	4	4,118	686	686		3	15,606	524	650
C ..	1	16,926	746	846		4	1,798	..	599
	2	16,926	705	651		5	2,832	..	472
	3	15,606	625	578		6	1,812	..	453
	4	3,519	703	703	3.. ..	1	16,926	651	735
D ..	1	16,926	769	677		2	16,926	746	769
	2	16,926	746	677		3	15,606	557	557
	3	15,606	600	600		4	2,397	..	599
	4	3,467	693	693		5	3,551	..	591
E ..	1	24,664	300	913		6	2,421	..	605
	2	21,252	885	885	4.. ..	1	16,926	746	769
	3	28,172	842	880		2	16,926	725	735
	4	21,252	924	924		3	15,606	600	600
	*5	4,951	708	707		4	2,461	..	820
	*6	4,951	708	707		5	2,918	..	583
F ..	1	18,315	800	704		6	2,461	..	615
Hospital	1	10,416	744	801	5.. ..	1	24,664	952	913
	*2	4,420	491	401		2	21,252	817	885
						3	28,172	787	880
						4	21,252	885	924
						*5	4,951	825	707
						*6	4,951	825	707
					6.. ..	1	18,315	787	704
					Hospital	1	10,416	800	801
						*2	4,420	402	401

* Veranda (open air) Dormitories.

Farm and Garden Produce.

The following table shows the quantities of vegetables and farm produce grown at this institution during each of the past fourteen years:—

Year Ending—	Vegetables.	Farm Produce.					
		Hay.	Maize.	Ensilage.	Green Feed.	Pumpkins.	Barley.
	T. cwt. qr. lb.	Tons.	T. cwt. qr. lb.	Tons.	Tons.	Tons cwt.	Tons.
30th June, 1923	10 8 2 18	46	4 1 2 0	75	50	3 10	..
30th June, 1924	11 13 2 25	61	9 15 0 0	100	30	..	..
30th June, 1925	10 12 3 2	61	12 15 0 0	100	40	..	..
30th June, 1926	9 8 1 19	60	11 9 2 0	100	60	1 0	..
30th June, 1927	18 12 0 8	63	12 19 2 0	100	60	2 10	..
30th June, 1928	12 15 2 26	63	15 7 2 0	100	55	..	..
30th June, 1929	13 14 3 9	54	14 5 0 0	100	50	..	..
30th June, 1930	30 18 3 11	48	9 0 0 0	100	90	..	..
30th June, 1931	40 5 0 26	31	..	150	133	..	..
30th June, 1932	45 12 3 27	78	11 5 0 0	80	72	10 0	..
30th June, 1933	52 12 0 15	112	11 5 0 0	233	78	5 1	..
30th June, 1934	89 5 2 16	180	20 5 0 0	80	14	..	..
30th June, 1935	98 4 0 4	147	131 0 0 0	70	7	..	16
30th June, 1936	82 0 1 10	110	262 5 0 0	156	30	..	48
30th June, 1937	63 9 0 8	94	..	160	110	..	..

Expenditure Table.

(Average number of Patients Daily Resident during the twelve months, 1,130.)

	£	*s.*	*d.*		£	*s.*	*d.*
Total Expenditure	65,962	9	3	Gross cost per patient for twelve months ..	58	7	5
Maintenance collected by Curator ..	7,148	17	11	Net cost per patient for twelve months ..	51	16	7
Sales	245	17	4	Gross cost per patient per week	1	2	5
Net Expenditure	58,567	14	0	Net cost per patient per week	0	19	11

MAGISTERIAL INQUIRY.

No magisterial inquiry was held at this hospital during the twelve months ending on the 30th June, 1937.

HONORARY VISITING STAFF.

Dr. Woodhill, M.R.C.P., the Honorary Visiting Physician, was called in as a consultant on four occasions during the past year, and on each occasion saw several patients.

Dr. A. W. L. Row, F.R.C.S., the Honorary Visiting Surgeon, was called in as a consultant on four occasions during the year, and on each occasion saw several patients.

To both Dr. Woodhill and Dr. Row our gratitude is due for their help.

To the Brisbane and South Coast Hospitals' Board we are indebted for the radium treatment of several patients during the year.

DENTAL TREATMENT OF PATIENTS.

The Visiting Dentist, Mr. J. E. B. McLean, during the year examined 972 patients (591 males and 381 females) and performed 347 extractions from male patients and 292 extractions from female patients, a total of 639 extractions.

During the year three female patients went to the Dental Clinic at the Toowoomba General Hospital for dentures, two of whom had a full set made, and the remaining patient a part false set.

One male patient received a full set of false teeth at the Dental Clinic at the Toowoomba General Hospital during the year; four dentures belonging to male patients were repaired at the Dental Clinic at the Toowoomba General Hospital during the year.

HONORARY VISITING CHIROPODIST.

During the year Mr. Shay, Honorary Visiting Chiropodist, treated 196 patients (9 males and 187 females).

OFFICIAL VISITORS.

During the past year Dr. J. Coffey, Deputy Director-General of Health and Medical Services, has continued to act as Official Visitor.

Mr. P. G. Knyvett, P.M., our other Official Visitor, having been transferred to Brisbane, Mr. J. E. Landy, P.M., was appointed in his stead.

DEPORTEES.

No patients were deported during the year.

BIRTHS.

One birth, a female infant, took place during the year, the mother being pregnant on admission.

WASSERMANN TEST.

Wassermann tests were carried out by the Commonwealth Health Laboratory, Toowoomba, on blood specimens submitted from 53 male patients and 36 female patients, total 89 patients out of 55 male and 37 female patients admitted and re-admitted during the year.

The details of the Wassermann tests were as follows:—

	Males.	Females.	Total.
Decidedly positive	1	—	1
Positive	—	—	—
Slightly positive	1	—	1
Total all degrees of positive re-actions	2	—	2
Percentage of all degrees of positive re-actions to admissions	3.64	—	2.17

ESCAPEES.

Eleven male and one female patients escaped during the year ending 30th June, 1937, all of whom were recaptured.

The period of absence of these patients varied from half an hour to eleven days twenty-three hours.

RECREATION.

During the year "Talkies" have been given weekly during the summer and fortnightly during the winter, and the standard of performance is high, due especially to the enthusiasm of our engineer, Mr. J. Jackson; they are very much appreciated by the patients, and are, indeed, our most popular form of entertainment.

Dances for the patients are held each week during the year, and the more formal winter ones are particularly enjoyed by the inmates.

Concerts have been given by the Caledonian Society and a party of nurses, these have been especially successful.

Very kindly the Salvation Army Band, the City Band, and the Municipal Band have given band concerts during the year.

The wireless sets are in use during the evenings and on Sundays, and the wireless music is certainly appreciated by some patients.

Cricket, football, and tennis matches have been held on the Recreation Ground during the year and many patients have enjoyed watching them.

The patients' annual sports were held this year on Coronation Day and turned out an extraordinary success, "a perfect day in every way"; actually 600 patients were present, a record for us.

The patients' annual fancy dress ball was held as usual at the end of the winter dancing season, and again proved a most spectacular and enjoyable function.

RELIGIOUS SERVICES.

Religious services have been held regularly during the year, as was the practice in past years, namely, Church of England, Roman Catholic, and Presbyterian, each being held in the Recreation Hall once a month; in addition, the clergymen of the Toowoomba churches have been assiduous in visiting inmate members of their flocks.

POST MORTEMS.

During the year post mortems were held on nine male and six female patients, total fifteen patients.

Table I.—Toowoomba.

ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS FOR THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

				Males.	Females.	Total.
On the books of the Hospital on 1st July, 1936				563	608	1,171
	Males.	Females.	Total.			
Admitted for the first time during the twelve months	43	27	70			
Readmitted during the twelve months	12	10	22			
Transferred from Goodna	2	15	17			
Transferred from Ipswich	..	..	..	57	52	109
Total under treatment during the year				620	660	1,280
Discharged, died, transferred, &c., during the year—						
Discharged recovered	20	20	40			
„ relieved	7	4	11			
„ not improved	2	1	3			
Transferred to Goodna	3	2	5			
Died	29	29	58			
Total discharged, died, transferred, &c.				61	56	117
Remaining on books of Hospital on 30th June, 1937				559	604	1,163
Average number daily resident during the year				550	580	1,130
On leave 30th June, 1937				9	16	25

Table II.—Toowoomba.

ADMISSIONS, DISCHARGES, AND DEATHS, WITH THE PROPORTION OF RECOVERIES AND DEATHS PER CENT., DURING THE YEAR ENDING 30TH JUNE, 1937.

Admitted			Re-admitted.			DISCHARGED.									Deaths.			Remaining on 30th June, 1937.			Average Number Daily Resident.			Percentage of Recoveries on Admissions.			Percentage of Patients Relieved.			Percentage of Deaths on Average Number Resident.		
						Recovered.			Relieved.			Not Improved.																				
Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
43	27	70	12	10	22	20	20	40	7	4	11	2	1	3	29	29	8	559	604	1,163	550	580	1,130	36·36	54·05	43·47	12·72	10·81	11·95	5·27	5·00	5·13

Table III.—Toowoomba.

CAUSES OF INSANITY IN THE PATIENTS ADMITTED DURING THE YEAR ENDING 30TH JUNE, 1937.

Causes.	PREDISPOSING.			EXCITING.			TOTAL.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Moral—									
Fright and shock	..	..	..	..	..	..	..	..	..
Mental anxiety and overwork	..	..	..	..	..	..	..	..	..
Domestic trouble and bereavement	..	..	..	..	..	..	..	..	..
Business worries	..	..	..	..	..	..	..	..	..
Religious excitement	..	..	..	..	..	..	..	..	..
Physical—									
Congenital mental defect without epilepsy	7	6	13	..	..	..	7	6	13
Alcohol	..	..	..	2	1	3	2	1	3
Surgical operations	..	..	..	..	..	..	..	..	..
Chronic nephritis	..	..	..	1	..	1	1	..	1
Disease of brain	..	..	..	..	..	..	..	..	..
General paralysis of the insane	..	..	..	1	..	1	1	..	1
Syphilis	..	..	..	1	..	1	1	..	1
Senility	8	5	13	..	..	..	8	5	13
Heredity	7	4	11	..	..	..	7	4	11
Epilepsy, acquired	3	1	4	..	..	..	3	1	4
Previous attacks	12	9	21	..	..	..	12	9	21
Cerebral hæmorrhage	..	..	..	1	..	1	1	..	1
Not ascertained	16	12	28	18	10	28	34	22	56
Encephalitis lethargica	..	..	..	..	1	1	..	1	1

Table IV.—Toowoomba.

CAUSES OF DEATH DURING THE YEAR ENDING 30TH JUNE, 1937.

Causes.	Males.	Females.	Total.
General Diseases—			
Enteric fever	..	..	..
Debility	..	..	..
Senility	6	5	11
Pernicious anæmia	..	..	..
Influenza	..	..	..
Carcinoma of breast	..	1	1
Carbuncle	..	..	..
Diseases of Nervous System—			
Cerebral syphilis	..	..	..
Cerebral hæmorrhage	2	1	3
Epilepsy	..	1	1
Diseases of Circulatory System—			
Arteriosclerosis	5	4	9
Atheroma of coronary arteries	1	1	2
Acute leukæmia	1	..	1
Aneurysm of aorta	1	..	1
Myocarditis	..	..	..
Valvular disease of heart	..	1	1
Diseases of Respiratory System—			
Abscess of lung	1	..	1
Chronic bronchitis	1	..	1
Influenza with pulmonary complications	1	5	6
Bronchopneumonia	..	1	1
Pulmonary tuberculosis	1	1	2
Lobar pneumonia	4	4	8
Disease of Alimentary System—			
Abscess of liver	..	1	1
Intestinal obstruction	1	..	1
Carcinoma of stomach	1	..	1
Carcinoma of bowel	..	1	1
Hanot's hypertrophic cirrhosis of liver	1	..	1
Diseases of Urinary System—			
Chronic nephritis	1	1	2
Pyelitis	..	1	1
Renal calculus	1	..	1
Totals	29	29	58

Table V.—Toowoomba.

LENGTH OF RESIDENCE IN HOSPITAL OF THE PATIENTS WHO RECOVERED, OR DIED DURING THE YEAR, OR REMAINED IN THE HOSPITAL ON THE 30TH JUNE, 1937.

Length of Residence.	DISCHARGES.						DEATHS.			REMAINING.		
	RECOVERED.			RELIEVED OR NOT IMPROVED.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 1 month	1	2	3	2	..	2	4	1	5	7	16	23
1 month and under 3 months	4	1	5	1	1	2	3	..	3	9	12	21
3 months and under 6 months	6	3	9	..	1	1	..	..	..	8	4	12
6 months and under 9 months	3	2	5	1	..	1	..	1	1	6	4	10
9 months and under 12 months	3	3	6	1	1	2	..	2	2	7	4	11
1 year and under 2 years ..	2	6	8	1	..	1	2	5	7	21	59	80
2 years and under 3 years ..	..	2	2	..	..	..	4	1	5	36	41	77
3 years and under 5 years ..	1	..	1	3	1	4	2	3	5	58	54	112
5 years and under 7 years ..	..	..	..	..	1	1	..	..	..	34	41	75
7 years and under 10 years ..	..	..	..	..	..	..	1	2	3	50	36	86
10 years and under 12 years ..	..	1	1	..	..	..	..	..	..	36	27	63
12 years and under 15 years ..	..	..	..	..	..	..	4	3	7	98	65	163
15 years and under 20 years ..	..	..	..	..	..	..	1	..	1	53	112	165
20 years and over	..	..	..	..	..	..	8	11	19	136	129	265
Totals	20	20	40	9	5	14	29	29	58	559	604	1,163

Table VI.—Toowoomba.

AGES OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, OR DEATHS OCCURRED DURING THE YEAR, AND OF THOSE WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1937.

Ages.	ADMISSIONS.			DISCHARGES.						DEATHS.			REMAINING.		
				RECOVERED.			RELIEVED AND NOT IMPROVED.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
5 years and under 10 years ..	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
10 years and under 15 years ..	1	1	2	..	..	..	..	..	..	..	..	..	1	4	5
15 years and under 20 years ..	4	..	4	2	..	2	..	..	..	..	1	1	8	2	10
20 years and under 30 years ..	12	4	16	6	3	9	1	2	3	..	3	3	35	32	67
30 years and under 40 years ..	10	10	20	3	10	13	2	3	5	2	3	5	87	77	164
40 years and under 50 years ..	8	8	16	5	2	7	1	..	1	..	4	4	123	145	268
50 years and under 60 years ..	9	7	16	4	2	6	1	..	1	6	..	6	131	148	279
60 years and under 70 years ..	4	4	8	..	3	3	4	..	4	8	6	14	86	122	208
70 years and under 80 years ..	2	1	3	..	..	..	..	..	..	9	7	16	67	53	120
80 years and under 90 years ..	4	2	6	..	..	..	..	..	..	4	5	9	12	15	27
90 years and over	1	..	1	..	..	..	..	..	..	..	..	..	2	..	2
Unknown	..	..	..	..	..	..	..	..	..	..	..	..	6	5	11
Totals	55	37	92	20	20	40	9	5	14	29	29	58	559	604	1,163

Table VII.—Toowoomba.

CONDITION AS TO MARRIAGE OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, AND DEATHS OCCURRED DURING THE YEAR, AND THOSE WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1937.

Condition as regards Marriage.	ADMISSIONS.			DISCHARGES.						DEATHS.			REMAINING.		
				RECOVERED.			RELIEVED AND NOT IMPROVED.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Single	37	14	51	15	3	18	5	5	10	21	9	30	464	304	768
Married	15	16	31	5	16	21	4	..	4	5	16	21	77	241	318
Widowed	2	7	9	..	1	1	..	..	..	3	4	7	6	35	41
Divorced	..	..	..	..	..	..	..	..	..	..	..	..	3	19	22
Unknown	1	..	1	..	..	..	..	..	..	..	..	..	9	5	14
Totals	55	37	92	20	20	40	9	5	14	29	29	58	559	604	1,163

Table VIII.—Toowmoomba.

BIRTHPLACES OF PATIENTS IN THE HOSPITAL DURING THE YEAR ENDING 30TH JUNE, 1937.

Birthplaces.	Admitted.			Remaining.		
	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales	7	7	14	60	36	96
Victoria	4	1	5	23	11	34
Queensland (white)	30	23	53	280	378	658
Queensland (black)	..	..	..	..	2	2
South Australia	1	..	1	10	4	14
West Australia	..	..	..	2	..	2
New Zealand	..	..	..	8	3	11
Tasmania	..	..	..	4	1	5
England and Wales	2	2	4	63	69	132
Scotland	4	..	4	16	20	36
Ireland	1	2	3	32	37	69
India and Ceylon	..	..	..	2	2	4
Africa	..	1	1	2	1	3
Czecho-Slovakia	..	..	..	3	1	4
Denmark	..	..	..	9	3	12
France	..	..	..	1	..	1
Greece	..	..	..	..	1	1
Germany	1	1	2	10	17	27
Italy	1	..	1	9	1	10
Norway	..	..	..	2	..	2
Sweden	1	..	1	4	..	4
Russia	..	..	..	4	1	5
Other European Countries	..	..	..	9	4	13
China	..	..	..	..	..	..
Other Asiatic Countries	..	..	..	1	..	1
South America	..	..	..	1	..	1
United States of America	..	..	..	1	3	4
Falkland Islands	1	..	1	..	..	..
Unknown	2	..	2	3	9	12
Totals	55	37	92	559	604	1,163

Table IX.—Toowoomba.

FORMS OF MENTAL DISORDER IN PATIENTS ADMITTED DURING THE YEAR ENDING 30TH JUNE, 1937.

Forms of Mental Disorder.	Males.	Females.	Total
Manic Depressive Psychosis—			
Mania—			
Simple	..	2	2
Acute	4	4	8
Chronic	..	..	..
Melancholia—			
Simple	..	..	..
Acute	8	4	12
Chronic	2	4	6
Acute confusional psychosis	1	1	2
Alcoholic Psychosis—			
Acute hallucinosis	2	..	2
Chronic hallucinosis	..	..	..
Dementia	..	1	1
Paraphrenia	2	4	6
Paranoia	1	..	1
Dementia præcox	13	4	17
Senile psychosis	8	5	13
Organic psychosis—			
General paralysis of the insane	1	..	1
Associated with encephalitis lethargica	..	1	1
Associated with cerebral hæmorrhage	1	..	1
Associated with cerebral syphilis	1	..	1
Congenital mental deficiency without epilepsy	5	5	10
Congenital mental deficiency with epilepsy	..	..	..
Congenital mental deficiency with psychosis	2	1	3
Epileptic psychosis	3	1	4
Secondary dementia	1	..	1
Totals	55	37	92

Table X.—Toowoomba.

BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

Bodily Condition.	Males.	Females.	Total.
In apparently good health and condition	42	25	67
In indifferent health and reduced condition	3	4	7
In bad health and exhausted condition	10	8	18
Totals	55	37	92

Table XI.—Toowoomba.

PREVIOUS OCCUPATIONS OF PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

Occupations.	Number	Occupations.	Number.
Males.		*Females.*	
Baker	1	Clerk	1
Chemist	1	Clerk-typist	1
Child	1	Domestic duties	18
Farmer	8	Housekeeper	1
Farm labourer	1	Housewife	7
Fettler	1	Nil	3
Grazier	1	Nurse	1
Horse breaker	1	Pensioner	3
Horse trainer	1	Shop assistant	1
Labourer	19	Unknown	1
Mechanic	1		
Mechanical engineer	1		
Nil	6		
Orchardist	1		
Painter	2		
Pensioner	3		
Plumber	1		
Relief worker	1		
Salesman	1		
Shop assistant	1		
Station hand	2		
Total	55	Total	37

Table XII.—Toowoomba.

DISTRICTS WHENCE PATIENTS WERE RECEIVED DURING THE YEAR ENDING 30TH JUNE, 1937.

Districts.	Males.	Females.	Total.
Toowoomba	25	16	41
North and North-Western Districts	3	2	5
Central and Central-Western Districts	..	..	..
South and South-Western Districts	27	19	46
Totals	55	37	92

Table XIII.—Toowoomba.

ARTICLES MADE UP BY PATIENTS IN THE WORKROOM DURING THE YEAR ENDING 30TH JUNE, 1937.

Name of Article.	Number.	Name of Article.	Number.
Aprons, assorted	29	Petticoats, assorted	360
Bags, assorted	77	Pillow shams	50
Belts	12	Pillow slips	542
Bibs	108	Pillow cases	141
Binders	12	Pyjama suits	519
Blankets	1	Pyjama trousers	11
Blazers	133	Quilts	72
Blinds	2	Sandbag covers	11
Bloomers	41	Serviettes	6
Blouses	1	Shifts	35
Bucket covers	2	Shirts	9
Coats	14	Sheets	1,193
Combinations	1,440	Sheets, mangle	15
Curtains	8	Shrouds	54
Cushion covers	4	Shirts	1
Drawers	38	Tablecloths, assorted	229
Dresses, assorted	984	Towels, hand and tea	1,645
Foment wringers	12	Towels, dressing	102
Gowns, dressing	23	Tray cloths	18
Jackets, assorted	229	Trousers, pairs	9
Jackets, canvas	26	Washers	236
Jug covers	6	Uniforms—	
Jumpers	2	Aprons	304
Mattress protectors	396	Belts	144
Mosquito nets	34	Caps	122
Muff suits	30	Collars	207
Nightgowns	403	Dresses	320
Overalls	4	Repaired garments	3,640
Pan covers	36		

HOSPITAL FOR THE INSANE, IPSWICH.

ADMISSIONS BY TRANSFER, DISCHARGES, AND DEATHS DURING THE TWELVE MONTHS FROM 1ST JULY, 1936, TO 30TH JUNE, 1937.

—	Males.	Females.	Total.	Males.	Females.	Total.
Number of patients in residence at the Hospital on 1st July, 1936				366	143	509
Number on leave of absence on 1st July, 1936				3	..	3
Total on the books of the Hospital on 1st July, 1936				369	143	512
Admissions by transfer during twelve months ending 30th June, 1937				15	1	16
Direct Admissions				2	3	5
Total on books and under treatment during the twelve months				386	147	533
Discharged and transferred	3	..	3			
Died	14	1	15			
Total discharges, transfers, and deaths				17	1	18
Remaining on the books of the Hospital on 30th June, 1937				369	146	515
Number on leave of absence on 30th June, 1937				..	3	3
Number in residence in the Hospital on 30th June, 1937				369	143	572
Average number daily resident during the twelve months				366	144	510

The following table gives the number in residence in this hospital at the end of each year for the past twenty-eight and a-half years, together with the daily average and the total number under treatment for the same period; also the increase or decrease for each year respectively:—

Year.	In Residence at the end of each Year.	Daily Average Resident during each Year.	On Books and under Treatment during each year.		
			Total Number.	Increase.	Decrease.
1909 ..	235	237	257	..	..
1910 ..	237	238	254	..	3
1911 ..	263	240	291	37	..
1912 ..	289	274	314	23	..
1913 ..	290	288	312	..	2
1914 ..	293	290	314	2	..
1915 ..	325	310	354	40	..
1916 ..	329	330	351	..	3
1917 ..	424	341	426	75	..
1918 ..	445	435	480	54	..
1919 ..	446	445	473	..	7
1920 ..	446	449	477	4	..
1921 ..	447	449	475	..	2
1922 ..	447	449	474	..	1
1923 ..	447	446	477	3	..
1924 ..	446	446	472	..	5
1925 ..	446	449	469	..	3
1926–27 *	446	447	485	16	..
1927–28	450	449	468	..	17
1928–29	453	452	485	17	..
1929–30	456	454	479	..	6
1930–31	456	456	474	..	5
1931–32	461	457	478	4	..
1932–33	461	460	480	2	..
1933-34	493	465	521	41	..
1934-35	508	497	534	13	..
1935–36	509	509	545	11	..
1936-37	512	510	533	..	12

* This period is for 18 months. All other periods are 12 months each.

ADMISSIONS.

All the admissions into this hospital, as in previous years, are by transfer only. All the transfers were from Goodna Mental Hospital. These transfers only take place to fill vacancies caused by deaths or discharges occurring in this hospital.

The following table shows the number of patients transferred to this hospital for each of the past twenty-eight and a-half years respectively:—

Year.	Admissions by Transfer.		
	Males.	Females.	Total.
1909	56	..	56
1910	15	..	15
1911	25	26	51
1912	18	28	46
1913	16	6	22
1914	17	7	24
1915	55	5	60
1916	20	5	25
1917	69	50	119
1918	26	28	54
1919	16	9	25
1920	22	7	29
1921	18	6	24
1922	19	5	24
1923	22	5	27
1924	19	3	22
1925	15	4	19
1926–27*	30	4	34
1927–28	9	11	20
1928–29	25	9	34
1929–30	20	4	24
1930–31	11	7	18
1931–32	16	5	21
1952–33	14	4	18
1933–34	38	21	59
1934–35	32	7	39
1935–36	28	9	37
1936-37	17	4	21
Totals for past 28½ years ..	688	279	967

* The period 1926–27 is for 18 months.

DISCHARGED RECOVERED.

The following tables show the number of recoveries and the recovery rate per cent. for each of the past twenty-eight and a-half years, respectively, together with the total recoveries and recovery rates for the whole period:—

TABLE No. 1—RECOVERIES.

Year.	Males.	Females.	Total.
1909	2	..	2
1910	1	..	1
1911	2	..	2
1912	..	..	..
1913	..	2	2
1914	1	1	2
1915	1	1	2
1916	1	1	2
1917	3	..	3
1918	..	2	2
1919	..	3	3
1920	4	..	4
1921	3	1	4
1922	4	2	6
1923	4	1	5
1924	3	1	4
1925	1	1	2
1926-27*	10	1	11
1927-28	3	1	4
1928-29	1	1	2
1929-30	..	1	1
1930-31	1	..	1
1931-32	..	..	..
1932-33	..	1	1
1933-34	..	..	..
1934-35	..	..	..
1935-36	1	1	2
1936-37	1	..	1
Total for past 28½ years	47	22	69

* This period is for 18 months.

TABLE No 2.—RECOVERY RATES ON THE ADMISSIONS BY TRANSFER.

Year.	Males.	Females.	Total.
1909	3·57	..	3·57
1910	6·66	..	6·66
1911	8·00	..	3·92
1912	..	..	..
1913	..	33·30	9·09
1914	5·75	14·40	19·79
1915	1·81	20·00	3·33
1916	5·00	20·00	8·00
1917	4·34	..	2·50
1918	..	7·14	3·70
1919	..	33·30	12·00
1920	18·18	..	13·79
1921	16·60	16·60	16·60
1922	5·24	4·32	5·15
1923	18·18	20·00	18·51
1924	15·78	33·33	18·18
1925	6.66	25·00	10·52
1926-27*	33·3	25·00	32·35
1927-28	33·3	9·09	20·00
1928-29	4·00	11·11	5·88
1929-30	..	25·00	4·17
1930-31	9·09	..	5·55
1931-32	..	..	..
1932-33	..	25·00	5·50
1933-34	..	..	..
1934-35	..	..	..
1935-36	3·57	11·11	5·40
1936-37	6·66	..	6·25
Recovery rate for past 28½ years	6·85	7·97	7·17

GENERAL PARALYSIS OF THE INSANE.

—	M.	F.	T.	M.	F.	Total.
Remaining on 1st July, 1936				..	..	..
Admitted during 1936–37 by transfer ..				1	..	1
Total under treatment during 1936–37				1	..	1
Discharged or transferred during 1936–37	..	..	..			
Died during 1936–37 ..	1	..	1			
Total discharged, transferred, and died during 1936–37				1	..	1
Remaining on 30th June, 1937				..	..	..
Percentage of general paralytics under treatment to total number of patients under treatment during 1936–37				·27	..	·19

EPILEPTIC PATIENTS.

—	M.	F.	T.	M.	F.	Total
Remaining on 1st July, 1936				20	16	36
Admitted during 1936–37 by transfer ..				..	2	2
Total under treatment during 1936–37				20	18	38
Discharged during 1936-37	..	..	..			
Transferred during 1936-37	..	..	..			
Died during 1936-37 ..	2	1	3			
Total discharged, transferred, and died during 1936–37				2	1	3
Remaining on 30th June, 1937				18	17	35
Percentage of epileptics under treatment to total number of patients under treatment during 1936–37				5·19	12·25	7·13
Percentage of epileptics remaining to number of patients remaining on 30th June, 1937				4·88	11·65	6·79

RETURNED SOLDIER PATIENTS.

The tables on following pages show the number of returned soldier patients who have been transferred from one of the other State Mental Hospitals to Ipswich—A, during the past year; B, from the commencement of the war up to 30th June, 1937.

Table A.

—	Admitted.	Readmitted.	Previously Admitted Prior to the War.	Total Admitted.	DISCHARGED.		Transferred.	Died.	Remaining.
	By tra	nsfer.			Recovered.	Relieved or Not Improved.			
From active service ..	..	..	..	..	..	..	..	..	..
From abroad, but who have not seen active service	..	..	..	..	..	..	..	..	..
From camp	..	..	..	..	..	..	..	..	..
Total	..	..	..	..	..	..	..	..	..

Table B.

—	Admitted.	Readmitted.	Previously Admitted Prior to the War.	Total Admitted.	DISCHARGED.		Transferred.	Died.	Remaining.
					Recovered.	Relieved or Not Improved.			
From active service ..	41	..	41	41	8	..	1	4	28
From abroad, but who have not seen active service	..	..	..	..	..	..	..	..	..
From camp	..	..	..	..	..	..	..	..	..
Total	41	..	41	41	8	..	1	4	28

CAUSES OF DEATH.

The following table shows the death rates per cent., calculated on the daily average number resident in this hospital, for each of the past twenty-seven and a-half years respectively:—

Year.	Males.	Females.	Total.
1909	3·33	..	3·33
1910	6·00	..	6.00
1911	8·78	..	8·78
1912	5·81	14·28	6·93
1913	6·20	4·25	5·90
1914	6·24	4·17	5·86
1915	8·49	7·84	8·38
1916	4·67	5·88	4·86
1917	6·37	5·26	6·15
1918	6·07	8·49	6·66
1919	4·53	5·26	4·70
1920	5·30	3·40	4·90
1921	4·80	4·20	4·40
1922	4·72	2·66	3·35
1923	5·15	3·49	4·41
1924	3·95	0·85	3·13
1925	3·31	2·56	3·11
1926-27*	5·75	3·41	5·14
1927-28	1·20	7·60	2·80
1928-29	5·90	5·10	5·70
1929-30	5·60	2·60	4·80
1930-31	2·37	3·36	2·63
1931-32	2·95	4·20	3·28
1932-33	3·81	2·52	3·47
1933-34	5·91	2·47	4·94
1934-35	5·57	2·17	4·63
1935-36	6·54	4·22	5·89

*The 1926-27 period is for 18 months ending June 30th, 1927.

ACCOMMODATION TABLE.

The following table gives the cubic space in each dormitory in all the wards of this hospital, together with the space per bed, in cubic feet:—

No. of Ward.	No. of Dormitory.	Total Capacity in cubic feet in each Dormitory.	Cubic feet per Patient in each Dormitory, 1935-36.	Cubic feet per Patient in each Dormitory, 1936-37.
		Male Division.		
1	1	11,688	467	467
	*1A	1,440	480	480
	*1B	1,440	480	480
	2	11,688	576	576
	*2A	2,080	693	693
	*2B	2,080	693	693
	3	11,230	510	510
	4	11,230	510	510
	5	11,688	649	649
	*5A	2,080	520	520
	*5B	2,080	693	693
	6	11,688	467	467
	*6A	1,440	240	240
	*6B	1,440	480	480
2	1	16,320	582	582
	2	10,800	584	584
	3	10,800	584	584
	4	10,800	514	514
	5	10,800	514	514
3	1	6,578	822	822
Hospital ..	1	5,520	788	788
	*2	3,303	550	550
		Female Division.		
1	1	15,100	719	719
	2	8,175	681	681
2	1	6,578	730	730
3	1	6,578	822	822
4	*1	7,000	473	473
	*2	7,000	473	473
Hospital ..	1	5,520	788	788
	*2	3,303	550	550

* Veranda (open-air) Dormitories.

Farm and Garden Produce.

The following table shows the quantities of vegetables and farm produce grown at this institution during the past fourteen years:—

Year ending—	Vegetables.				Farm Produce.		
					Chaff.	Hay.	Green Feed.
	Tons	cwt.	qr.	lb.	Tons.	Tons.	Tons.
30–6–23 ..	34	17	2	14	11	15	34
30–6–24 ..	23	1	3	3	..	..	10
30–6–25 ..	28	2	0	16	16	..	76½
30–6–26 ..	22	17	2	20	9	..	34
30–6–27 ..	18	7	0	25	8	..	22
30–6–28 ..	23	11	3	26	20	..	44
30–6–29 ..	20	13	0	27	15½	..	27
30–6–30 ..	24	19	3	27	6½	7½	48
30–6–31 ..	21	11	3	1	9	..	63¼
30–6–32 ..	11	3	0	10	9¾	2	75½
30–6–33 ..	25	8	1	16	2½	..	58¼
30–6–34 ..	36	4	0	0	4	..	54½
30–6–35 ..	39	2	0	0	17¾	..	51¾
30–6–36 ..	46	10	0	0	8½	..	40¼
30–6–37 ..	39	8	0	0	24¾	..	55½

Expenditure Tarle.

(*Average number of Patients Daily Resident during the twelve months,* 510.)

	£	*s.*	*d.*
Total expenditure	43,258	5	10
Maintenance collected by Curator	2,608	2	4
Net expenditure	40,650	3	6
Gross cost per patient for twelve months ..	84	16	5
Net cost per patient for twelve months ..	79	14	2
Gross cost per patient per week	1	12	8
Net cost per patient per week	1	10	8

I regret to have to record the death of a promising young officer, Mr. George Walter Boody, Record Assistant at this Hospital, who passed away in December last.

New Attendants Mess Room.

During the year an attendants' mess room was built.

Electric Irons in Laundry.

During the year nine electric irons were installed in the laundry, and proved to be a great advantage to the institution.

Magisterial Inquiry.

One magisterial inquiry was held during the year concerning the death of a patient. The inquiry was closed, there being no suspicious circumstances.

Escapes.

Four male patients escaped during the year. All were returned to hospital from within two to twenty-four hours.

Recreation.

Indoor entertainments have been supplied to the patients as heretofore in the form of weekly dances (except in the summer months), and numerous concerts kindly given by local artists. Similarly to last year, the staff of this hospital organised a patients' fancy dress ball, which was most successful. In November, the returned soldiers on the staff arranged an Armistice dinner for the returned soldier patients, which was honoured by the attendance of officers of the local branch of the R.S.S.I.L.A. In February, the staff organised a very successful sports gathering for the patients. Some creditable performances were recorded, and keen rivalry and good sportsmanship were always evident. Appreciation is felt for the assistance provided by numerous local residents and visiting concert parties during the year. During the year wireless sets have been installed in each ward in place of the loud speakers controlled by a central wireless set. These sets are greatly appreciated by the patients.

Religious Services.

Religious services, which have been held regularly throughout the past year as heretofore, consist of monthly Church of England, Roman Catholic, and Methodist services, while the Salvation Army holds a quarterly service. At Christmas, the Methodists distribute gifts of sweets, cakes, cigarettes, and tobacco to every patient.

Dental Treatment of Patients.

The hope expressed in previous reports that a dentist would be appointed to this Mental Hospital has not been realised.

Nurses' Quarters.

As regards the proposed nurses' quarters, nothing has been done. The present accommodation for housing nurses is severely taxed.

Red Cross Society.

As in former years, the Red Cross Society has forwarded regularly fortnightly supplies of tobacco and cigarettes for the returned soldier patients in this Mental Hospital, and, in addition, cakes, sweets, and fruits are forwarded at Christmas time.

Water Conservation Scheme.

This scheme has been in operation during the past two years, and has, in addition to providing the vegetable garden with an abundance of water, greatly reduced the annual water consumption, while over the same period, additional services have been laid to ward and flower gardens. The surplus water from the septic tank conservation and laundry has been used on the farm cultivation. This scheme saved the Institution £10 per week in cattle fodder alone, during the very dry period at the beginning of the year.

Table I.—Ipswich.

ADMISSIONS, READMISSIONS, DISCHARGES, AND DEATHS, FROM 1ST JULY, 1936, TO 30TH JUNE, 1937.

	Males.	Females.	Total.	Males.	Females.	Total.
On books of the Hospital on 30th June, 1936				369	143	512
Admissions by Transfer during 12 months ending 30th June, 1937				15	1	16
Direct Admissions				2	3	5
Total on Books under treatment during 12 months				386	147	535
Discharged	3	..	3			
Transferred	..	..	..			
Died	14	1	15			
Total Discharges, Transfers, and Deaths				17	1	18
Remaining on books of Hospital on 30th June, 1937				369	146	515
Average Number daily resident during the year				366	144	510
On leave of absence 30th June, 1937				..	3	3

Table II.—Ipswich.

Admissions, Discharges, and Deaths, with the Proportions of Recoveries and Deaths per Cent., from 1st July, 1935, to 30th June, 1937.

Cases Transferred to Ipswich which have been Treated before.			DISCHARGED.									Died.			Remaining on 30th June, 1937.			Average Number Daily Resident.			Percentage of Recoveries on Admissions.			Percentage of Patients Relieved and not Improved.			Percentage of Deaths on Average Number Resident.		
			Recovered.			Relieved.			Not Improved.																				
Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
15	1	16	1	...	1	1	...	1	1	...	1	14	1	15	369	146	515	366	144	510	6·66	...	6·25	12·66	...	12·50	4·09	·69	3·14

Table IV.—Ipswich.

CAUSES OF DEATHS FROM 1ST JULY, 1936, TO 30TH JUNE, 1937.

Causes.	Males.	Females.	Total.
Diseases of Circulatory System—			
Angina-pectoris	1	..	1
Arterio-sclerosis	1	..	1
Myocardial degeneration	1	..	1
General Diseases—			
Adeo-carcinoma of breast	..	1	1
Carcinoma of gall bladder	1	..	1
Epithelomina of hand	1	..	1
Senility	3	..	3
General debility	1	..	1
Drowning	1	..	1
Epidemic Diseases—			
Influenza	1	..	1
Diseases of Central Nervous System—			
Epileptic dementia	2	..	2
General paralysis of the insane	1	..	1
Totals	14	1	15

Table V.—Ipswich.

LENGTH OF RESIDENCE IN THE HOSPITAL OF THE PATIENTS WHO WERE DISCHARGED OR DIED DURING THE YEAR, AND OF THOSE WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1937.

Length of Residence.	DISCHARGES.						DEATHS.			REMAINING.		
	RECOVERED.			RELIEVED AND NOT IMPROVED.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 1 month	..	..	..	..	..	..	1	..	1	5	2	7
1 month and under 3 months	..	..	..	..	..	..	..	..	..	4	1	5
3 months and under 6 months	..	..	..	..	..	..	..	..	..	13	6	19
6 months and under 9 months	..	..	..	..	..	..	..	..	..	12	2	14
9 months and under 12 months	..	..	..	1	..	1	..	..	..	5	2	7
1 year and under 2 years	..	..	..	1	..	1	2	..	2	26	5	31
2 years and under 3 years	1	..	1	..	..	..	..	..	..	29	19	48
3 years and under 5 years	..	..	..	..	..	..	3	..	3	20	8	28
5 years and under 7 years	..	..	..	..	..	..	..	..	..	23	8	31
7 years and under 10 years	..	..	..	..	..	..	2	..	2	34	17	51
10 years and under 12 years	..	..	..	..	..	..	..	..	..	15	1	16
12 years and under 15 years	..	..	..	..	..	..	1	..	1	26	11	37
15 years and under 20 years	..	..	..	..	..	..	2	1	3	67	42	109
20 years and over	..	..	..	..	..	..	3	..	3	90	22	112
Totals	1	..	1	2	..	2	14	1	15	369	146	515

Table VI.—Ipswich.

AGES OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, AND DEATHS OCCURRED DURING THE YEAR AND OF THOSE WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1937.

Ages.	ADMISSIONS.			DISCHARGES.						DEATHS.			REMAINING.		
				RECOVERED.			RELIEVED AND NOT IMPROVED.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Under 5 years	2	2	4	..	..	..	..	..	..	..	..	..	4	2	6
5 years and under 10 years.. ..	2	1	3	..	..	..	1	..	1	..	..	..	5	7	12
10 years and under 15 years.. ..	..	..	..	..	..	..	..	..	..	..	..	..	13	6	19
15 years and under 20 years.. ..	..	..	..	..	..	..	..	..	..	..	..	..	1	4	5
20 years and under 30 years.. ..	4	..	4	..	..	..	..	..	..	2	..	2	15	9	24
30 years and under 40 years.. ..	4	..	4	..	..	..	..	..	..	2	..	2	47	16	63
40 years and under 50 years.. ..	..	1	1	..	..	..	..	..	..	1	..	1	79	29	108
50 years and under 60 years.. ..	1	..	1	1	..	1	..	..	..	3	..	3	77	40	117
60 years and under 70 years.. ..	2	..	2	..	..	..	..	..	..	2	1	3	80	23	103
70 years and under 80 years.. ..	1	..	1	..	..	..	1	..	1	2	..	2	40	8	48
80 years and under 90 years.. ..	..	..	..	..	..	..	..	..	..	1	..	1	5	2	7
90 years and under 100 years ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unknown	1	..	1	..	..	..	..	..	..	1	..	1	3	..	3
Totals	17	4	21	1	..	1	2	..	2	14	1	15	369	146	515

Table VII.—Ipswich.

CONDITIONS AS REGARDS MARRIAGES OF THE PATIENTS WHOSE ADMISSIONS, DISCHARGES, AND DEATHS OCCURRED DURING THE YEAR, AND OF THOSE WHO REMAINED IN THE HOSPITAL ON THE 30TH JUNE, 1937.

Condition as regards Marriage.	ADMISSIONS.			DISCHARGES.						DEATHS.			REMAINING.		
				RECOVERED.			RELIEVED AND NOT IMPROVED.								
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Single	14	3	17	..	..	..	2	..	2	9	..	9	280	80	360
Married	3	1	4	1	..	1	..	..	..	4	1	5	58	48	105
Widowed	..	..	..	..	..	..	..	..	..	..	..	..	5	7	12
Divorced	..	..	..	..	..	..	..	..	..	..	..	..	1	3	4
Unknown	..	..	..	..	..	..	..	..	..	1	..	1	25	8	33
Totals	17	4	21	1	..	1	2	..	2	14	1	15	369	146	515

Table VIII.—Ipswich.

BIRTHPLACES OF PATIENTS IN THE HOSPITAL FROM 1ST JULY, 1936, TO 30TH JUNE, 1937.

Birthplaces	ADMISSIONS.			REMAINING.		
	Males	Females.	Total	Males.	Females	Total.
Australasia—						
New South Wales	1	..	1	20	6	26
Victoria	..	..	..	5	2	7
Queensland (White)	9	4	13	155	90	245
Queensland (Aboriginal)	3	..	3	15	2	17
South Australia	1	..	1	3	1	4
Western Australia	..	..	..	1	..	1
New Zealand	..	..	..	1	..	1
Northern Territory	..	..	..	1	..	1
United Kingdom—						
England and Wales	1	..	1	44	15	59
Scotland	..	..	..	10	6	16
Ireland	..	..	..	39	13	52
Other British Possessions—						
India	..	..	..	7	..	7
Canada	..	..	..	2	..	2
South Africa	..	..	..	8	..	8
Ceylon	..	..	..	1	..	1
European Foreign Countries—						
Austria-Hungary	..	..	..	1	..	1
Germany	..	..	..	6	..	6
France	..	..	..	1	..	1
Denmark	..	..	..	..	1	1
Norway	..	..	..	1	..	1
Russia	..	..	..	2	2	4
Spain	..	..	..	1	..	1
Portugal	..	..	..	1	..	1
Switzerland	1	..	1	2	1	3
Italy	..	..	..	5	1	6
Greece	..	..	..	1	..	1
Other European Countries	..	..	..	9	..	9
Other Foreign Countries—						
China	..	..	..	11	2	13
Japan	..	..	..	5	..	5
United States of America	..	..	..	2	1	3
Polynesia	1	..	1	3	1	4
At Sea	..	..	..	..	..	..
Unknown	..	..	..	6	2	8
Totals	17	4	21	369	146	515

Table IX.—Ipswich.

FORMS OF MENTAL DISEASES IN THE PATIENTS TRANSFERRED TO IPSWICH FROM 1ST JULY, 1936, TO 30TH JUNE, 1937.

Form of Mental Disorder.	Males.	Females.	Total.
Schizophrenia	8	..	8
Congenital imbecility (with epilepsy)	..	1	1
Deaf mutism	2	..	2
General paralysis of the insane	1	..	1
Imbecility	1	..	1
Confusional insanity	1	..	1
Alcoholic hallucinatory	1	..	1
Alcoholic dementia	1	..	1
Arterio sclerotic dementia	1	..	1
Idiocy	..	2	2
Melancholia	..	1	1
Congenital mental deficiency	1	..	1
Totals	17	4	21

Table X.—Ipswich.

Bodily Health and Condition of Patients Transferred from 1st July, 1936, to 30th June, 1937.

Bodily Condition.	Males.	Females.	Total.
In apparently good health and condition	15	4	19
In indifferent health and reduced condition	..	..	..
In bad health and exhausted condition	2	..	2
Totals	17	4	21

Table XI.—Ipswich.

Previous Occupations of Patients Admitted from 1st July, 1936, to 30th June, 1937.

Occupation—Males.	Number.	Occupation—Females.	Number.
Labourer	7	Domestic duties	1
Station hand	2	Nil	3
Seaman	1		
Stockman	1		
Farmer	1		
Nil	4		
Unknown	1		
Total	17	Total	4

Table XII.—Ipswich.

Districts whence Patients were Received at the Hospital from 1st July, 1936, to 30th June, 1937.

Districts.	Males.	Females.	Total.
Northern and North-Western	8	2	10
Central	2	..	2
Southern	7	2	9
Totals	17	4	21

Table XIII.—Ipswich.

Articles made in Workroom from 1st July, 1936, to 30th June, 1937.

Articles.	Number.	Articles.	Number.
Shirts, flannel	804	Dresses	824
Shirts, striped	1,107	Nurses gowns	13
Shirts, calico	65	Shrouds	33
Vests, flannel	91	Jackets, tweed	81
Vests, flanelette	57	Coat, tweed	1
Pyjama coats, flannelette	155	Tablecloths, damask	203
Pyjama trousers, flanelette, pair	181	Mosquito nets	103
Nightgowns, flanelette	26	Tea bag	1
Babies napkins, flanelette	36	Bedticks	146
Shirt waist, boys	146	Pillow cases	141
Rompers, boys, pair	16	Sheets	1,687
Petticoats, flannel	136	Quilts	27
Petticoats, calico	156	Towels	1,400
Pillow slips, calico	740	Sheets, waterproof	132
Combinations, calico, pair	123	Aprons, waterproof	4
Drawers, calico, pairs	191	Window blinds	15
Nightgowns, calico,	173	Uniforms—	
Shifts, calico	190	Dresses, pique	16
Aprons, calico	20	Dresses, blue zephyr	188
Pudding cloths, calico	10	Dresses, blue tobralco	16
Abdominal bandages, calico	4	Aprons	272
Boys suits, paddy cloth	4	Caps	155
Feeders	6	Collars	282
Talkie equipment covers	2	Hats, trimmed	47
Boys trousers, pairs	115		

TOWNSVILLE RECEPTION HOUSE.

—	M.	F.	T.	Males.	Females.	Total.
On books on 1st July, 1936				4	1	5
Admitted and readmitted during the twelve months				44	19	63
Total on books and under treatment during twelve months				48	20	68
Discharged recovered ..	7	6	13			
Transferred to Goodna ..	33	9	42			
Died	3	1	4			
Total discharged, transferred, and died..				43	16	59
Remaining on books on 30th June, 1937 ..				5	4	9
Average number daily resident during the twelve months				4	1	5

The following table shows the admissions, including readmissions, into the Townsville Reception House, for each of the past twenty-eight and a-half years:—

Year.	Males.	Females.	Total.
1909	62	19	81
1910	60	14	74
1911	66	24	90
1912	75	19	94
1913	78	26	104
1914	79	23	102
1915	59	26	85
1916	87	19	106
1917	83	26	109
1918	55	20	75
1919	74	19	93
1920	72	17	89
1921	59	26	85
1922	60	33	93
1923	59	30	89
1924	73	24	97
1925	79	23	102
1926–27*	120	21	141
1927–28	65	18	83
1928–29	55	16	71
1929–30	53	27	80
1930–31	52	18	70
1931–32	56	23	79
1932–33	38	19	57
1933–34	52	26	78
1934–35	50	21	71
1935–36	36	20	56
1936–37	44	19	63
Total for past 28½ years	1,801	616	2,417

* This period is for 18 months.

The following table gives the numbers of patients that have been transferred each year for the past twenty-eight and a-half years from this reception house to Goodna Mental Hospital, together with the total numbers of transfers for the whole period:—

Year.	Males.	Females.	Total.
1909	58	14	72
1910	50	11	61
1911	50	19	69
1912	58	14	72
1913	62	23	85
1914	62	14	76
1915	45	19	64
1916 . ..	71	15	86
1917	58	24	82
1918	43	18	61
1919	49	14	63
1920	44	11	55
1921	50	25	75
1922	52	27	79
1923	43	21	64
1924	64	21	85
1925	64	18	82
1926–27*	94	16	110
1297–28	39	13	52
1928–29	41	15	56
1929–30	34	23	57
1930–31	41	13	54
1931–32	49	11	60
1932–33	30	11	41
1933–34	33	22	55
1934–35	48	17	65
1935–36	24	17	41
1936–37	33	9	42
Total for past 28½ years	1,389	475	1,864

* This period is for 18 months.

DEATHS.

There were four deaths in the reception house during the past twelve months.

ESCAPES AND ACCIDENTS.

No patient escaped during the past twelve months.

No serious accident or injury happened to any patient in the reception house during the past twelve months.

EXPENDITURE TABLE.

(*Average number daily resident during the twelve months*, 5.)

	£	s.	d.
Total expenditure	1,893	6	2
Maintenance collected by Curator	8	15	0
Net expenditure	1,884	11	2
Gross cost per patient for twelve months ..	378	13	2
Net cost per patient for twelve months ..	376	18	2
Gross cost per patient per week	7	5	7
Net cost per patient per week	7	4	11

EPILEPTIC HOME, ROCKVILLE, WILLOWBURN.

During the year ending the 30th June, 1937, a school teacher was appointed by the Department of Public Instruction, and that department certainly deserves credit for having selected so competent a teacher. She is at all times kind, sympathetic, tactful, and capable in her management of the children. There are 17 scholars at present, and a few likely ones among the applicants for admission. Every endeavour is being made to develop the self activity of the pupil, therefore, several kindergarten lessons are taken, e.g., sewing cards, matweaving, modelling in plasticene. Besides ordinary schoolwork, singing, physical exercises incorporating flag drill, organised ball and other games. Elementary efforts are being made in basket work, which will be introduced when all material appliances necessary are ready.

Dr. St. Vincent Welch has visited the school children accompanied by Miss A. Leeper, school nurse. The school dentist has also visited and examined the teeth of all patients attending the school. Miss Leeper advises that she has been instructed to make an examination of the scholars.

The patients visit the Willowburn Mental Hospital, where all teeth are examined and extracted if necessary by Mr. J. E. McLean.

OCCUPATION.

This year an endeavour has been made to provide more occupation for the male patients under the instruction of the wardsman, Mr. C. W. Graff. Mattress-making has proved successful, a number of new ones were made for the winter, and a number of old ones re-made.

Carpentry has also been commenced, and several well-finished articles have been made, including workshop and carpenter's bench, school desk, woodboxes, wall brackets, ward screens. A number of chairs were re-polished and varnished, verandah seats were renovated and painted.

Boot repairing is to be commenced in the near future. Up to the present only minor repairs have been done.

ENTERTAINMENTS.

Entertainments are held in the female patients' dining-room, dancing, cards, table-tennis, and other games are played, usually on Wednesday nights. Pictures, concerts, sports and band concerts are held at the Mental Hospital, Willowburn, and a fair number of our patients attend. About 55 patients, including the children, spent a day at the Toowoomba Show. The children also attended the Rockville School picnic and R.A.C.Q. picnic. The Methodist Church Guild gave their usual concert and Christmas party, each patient receiving sweets, cakes, sandwiches, and a suitable gift. The wireless programmes are always appreciated very much. Two new speakers have been added, one to the male patients' dining-room, and the other to the nurses' home. The wireless electric pick-up supplies music for the patients' dancing, new records for same were supplied during the year.

The usual Christmas-tree was arranged by the staff, and enjoyed by all.

Reading materials were forwarded by relatives and friends of inmates, also by the guilds of different churches. The "Toowoomba Chronicle" and "Courier-Mail" are the daily newspapers provided.

CHURCH SERVICES.

Religious services are held at the institution every Sunday. The sick patients are visited by the clergymen of their own denomination.

Sacred concerts were given at Easter by the Church of England and Salvation Army.

All new patients were inoculated to prevent typhoid fever. Two members of the staff were off duty with German measles. No other cases of infectious diseases occurred during the year.

Five patients were admitted to the Toowoomba General Hospital for operative treatment, and a few were X-rayed at that institution.

DEATHS.

Two female patients died during the year.

OFFICIAL VISITORS.

The institution was visited by Mr. P. S. Knyvett, P.M., prior to his transfer to Brisbane, and subsequently by Mr. J. E. Landy, P.M., who was appointed to Toowoomba in Mr. Knyvett's place.

Vegetables grown during the year were cabbage, cauliflower, potatoes, beans, peas, onions, leeks, squashes, marrows, pumpkins, sweet potatoes, parsnips, beetroot, cucumbers, lettuce, white and swede turnips, spinach, silver beet, radish, tomatoes, rhubarb, kohl rabbi, chillies, and herbs.

The vegetable and flower gardens are kept in order by a wardsman, with the assistance of a few male patients.

Sufficient poultry (fowls and muscovy ducks) was raised for Christmas, Easter, and special dinners for other days. A number of chickens and ducks was hatched, and some were bought from a hatchery. These birds are now producing eggs for cooking purposes, &c. We hope to increase the number this year.

In the sewing room a large number of articles was made for both male and female patients, all ward, kitchen, and staff linen, also a fair number of bed ticks and pillow cases, cushions, and curtains. A nurse is in charge of the sewing room as many days as she can be spared from ward work to enable these articles to be made. There is no seamstress at the institution. It would be appreciated if provision was made for a seamstress, as at the present time all members of the staff have to pay a dressmaker. In the other institutions the uniforms are made in the sewing room.

Renovations carried out by the Public Works Department included the flyproofing of the general kitchen, nurses' kitchen and dining-room, matron's dining-room, repair of kitchen wall, painting general kitchen, male and female dining-rooms, new sink and draining-board in kitchen, new tank and stand at laundry, repairs and furnishings. The fire mains were extended and enclosed in suitable boxes with hose attached ready for use.

A partition was built in the male patients' dining-room to make a school-room.

The western verandas of the female wards were enclosed to make more accommodation, and have sliding glass windows, which are a great improvement on the verandas enclosed on the male side with louvres last year.

Tables showing the admissions, readmissions, discharges, and deaths; ages of patients admitted and readmitted; conjugal condition of patients admitted and readmitted; districts from which patients were admitted and readmitted; religious persuasions of patients admitted and readmitted; and causes of death of patients during the twelve months ending on 30th June, 1937, together with a table showing admissions, readmissions, discharges, deaths, &c., during the past seventeen years, are appended:—

ADMISSIONS, RE-ADMISSIONS, DISCHARGES, AND DEATHS, FOR THE TWELVE MONTHS ENDING 30TH JUNE, 1937.

—				Males.	Females.	Total.
On books of Epileptic Home on 1st July, 1936				29	46	75
On leave from Epileptic Home on 1st July, 1936				2	3	5
In residence on 1st July, 1936				27	43	70
	Males.	Females.	Total.			
Admitted for first time during twelve months	8	5	13			
Re-admitted during the twelve months	..	1	1			
Admitted and re-admitted during the twelve months				8	6	14
Total number under treatment during the year				37	52	89
Discharged, and died during the year—						
Discharged—	Males.	Females.	Total.			
Recovered	..	..	..			
Relieved	1	..	1			
Not improved	1	2	3			
Died	..	2	2			
Total discharged and died during the year				2	4	6
Remaining on books of Epileptic Home, 30th June, 1937				35	48	83
On leave on 30th June, 1937				6	6	12
In residence on 30th June, 1937				29	42	71

AGES OF PATIENTS ADMITTED AND READMITTED DURING THE YEAR ENDED 30TH JUNE, 1937.

—	Males.	Females.	Total.
5 years and under 10 years	..	..	..
10 years and under 15 years	3	3	6
15 years and under 20 years	3	..	3
20 years and under 25 years	2	..	2
25 years and under 30 years	..	..	..
30 years and under 35 years	..	2	2
35 years and under 40 years	..	..	..
40 years and under 45 years	..	1	1
Totals	8	6	14

CONJUGAL CONDITION OF PATIENTS ADMITTED AND RE-ADMITTED DURING THE YEAR ENDED 30TH JUNE, 1937.

—	Males.	Females.	Total.
Married	..	1	1
Single	8	5	13
Widowed	..	..	..
Divorced	..	..	..
Totals	8	6	14

DISTRICTS FROM WHICH PATIENTS WERE ADMITTED AND RE-ADMITTED DURING THE YEAR ENDED 30TH JUNE, 1937.

——	Males.	Females.	Total.
Toowoomba	2	1	3
North and North-western Districts	1	1	2
Central and Central-western Districts	1	..	1
South and South-western Districts	4	4	8
Totals	8	6	14

CAUSES OF DEATHS THAT HAVE OCCURRED DURING THE YEAR ENDED 30TH JUNE, 1937.

——	Males.	Females.	Total.
Uterine Hæmorrhage	..	1	1
Epilepsy	..	1	1
Total	..	2	2

EPILEPTIC HOME, WILLOWBURN.

Year from 1st July to 30th June.	On Books.			On Leave.			In Residence.			Admitted and Re-admitted.			Total under Treatment.			Discharged.			Died.			Transferred to Willowburn Mental Hospital.			Transferred to General Hospital.			On Books.			On Leave.			In Residence.		
	1st July.			1st July.			1st July.			– – – During twelve months from 1st July to 30th June. – –																		30th June.			30th June.			30th June.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
1918-19	..	..	..	..	..	..	..	..	..	19	33	52	19	33	52	3	..	3	..	..	..	..	..	..	..	..	..	16	33	49	..	..	..	16	33	49
1919–20	16	33	49	..	..	..	16	33	49	24	15	39	40	48	88	21	13	34	1	5	6	..	..	..	..	..	..	18	30	48	..	..	..	18	30	48
1920–21	18	30	48	..	..	..	18	30	48	8	10	18	26	40	66	4	3	7	2	..	2	..	..	..	..	..	..	20	37	57	..	..	..	20	37	57
1921–22	20	37	57	..	..	..	20	37	57	12	10	22	32	47	79	6	5	11	..	2	2	..	..	..	..	..	..	26	40	66	..	..	..	26	40	66
1922–23	26	40	66	..	..	..	26	40	66	12	7	19	38	47	85	9	4	13	2	..	2	..	..	..	..	..	..	27	43	70	..	..	..	27	43	70
1923–24	27	43	70	..	..	..	27	43	70	9	10	19	36	53	89	5	1	(	2	2	4	..	..	..	..	..	..	29	50	79	..	..	..	29	50	79
1924–25	29	50	79	..	..	..	29	50	79	5	9	14	34	59	93	1	4	5	..	1	1	8	6	14	..	..	..	25	48	73	..	..	..	25	48	73
1925–26	25	48	73	..	..	..	25	48	73	13	9	22	38	57	95	2	6	8	2	1	3	2	..	2	..	..	..	32	50	82	..	..	..	32	50	82
1926–27	32	50	82	..	..	..	32	50	82	9	5	14	41	55	96	9	5	14	..	1	1	3	6	9	..	..	..	29	43	72	..	..	..	29	43	73
1927–28	29	43	72	..	..	..	29	43	72	7	5	12	36	48	84	6	1	7	1	1	2	1	..	1	1	1	2	27	45	72	..	..	..	27	45	72
1928–29	27	45	72	..	..	..	27	45	72	12	6	18	39	51	90	3	2	5	1	1	2	5	7	12	..	..	..	30	41	71	..	..	..	30	41	71
1029–30	30	41	71	..	..	..	30	41	71	4	5	9	34	46	80	2	4	6	3	1	4	2	8	10	..	..	..	27	33	60	..	1	1	27	32	59
1930–31	27	33	60	..	1	1	27	32	59	8	13	21	35	46	81	4	4	8	1	1	2	..	1	1	..	..	..	30	40	70	..	1	1	30	39	69
1031–32	30	40	70	..	1	1	30	39	69	9	13	22	39	53	92	5	6	11	1	..	1	4	5	9	..	..	..	29	42	71	..	1	1	29	41	70
1932–33	29	42	71	..	1	1	29	41	70	9	7	16	38	49	87	2	5	7	1	..	1	6	5	11	..	..	..	29	39	68	1	2	3	28	37	65
1933–34	29	39	68	1	2	3	28	37	65	6	12	18	35	51	86	4	1	5	1	1	2	4	2	6	..	..	..	26	47	73	2	3	5	24	44	68
1934–35	26	47	73	2	3	5	24	44	68	9	11	20	35	58	93	3	3	6	1	2	3	1	6	7	..	..	..	30	47	77	2	2	4	28	45	73
1935–36	31	47	78	2	2	4	29	45	74	8	11	19	39	58	97	4	6	10	1	..	1	5	6	11	..	..	..	29	46	75	2	3	5	27	43	70
1936–37	29	46	75	2	3	5	27	43	70	8	6	14	37	52	89	2	2	4	..	2	2	1	1	2	..	..	..	35	48	83	6	6	12	29	42	71

ANNUAL REPORT

OF THE

DIRECTOR OF INFANT WELFARE

TO

30th JUNE, 1937.

Annual Report of the Director of Infant Welfare for the Year 1936-37.

INFANT MORTALITY.

The infant mortality of Queensland per 1,000 births in 1936 was 36·2, as compared with 37·3 in 1935, though not much below the former record of 36·4 in 1931.

ANNUAL INFANT MORTALITY IN THE AUSTRALIAN STATES AND NEW ZEALAND IN THE LAST TEN YEARS.

Year.	Queensland.	N.S. Wales.	Victoria.	South Aus.	West. Aus.	Tasmania.	N. Zealand.
1927	54·5	55·0	56·1	53·4	45·9	53·0	38·7
1928	45·5	54·9	55·6	47·5	48·1	64·0	35·9
1929	46·1	56·6	47·2	40·9	56·2	53·2	34·1
1930	40·2	49·8	46·6	48·4	46·7	50·6	34·5
1931	36·6	43·5	44·5	36·4	41·5	46·0	32·2
1932	40·3	41·6	43·0	36·7	44·6	40·3	33·7
1933	42·6	39·3	40·4	32·1	36·8	41·1	31·6
1934	40·6	46·4	44·6	35·6	40·9	42·3	31·7
1935	37·3	39·4	41·2	35·0	40·2	51·8	32·2
1936	36·2	43·5	42·3	31·1	42·2	49·6	31·0

AVERAGE INFANT MORTALITY IN FIVE-YEAR PERIODS IN THE AUSTRALIAN STATES AND NEW ZEALAND.

Years.	Queensland.	N.S. Wales.	Victoria.	South Aust.	West. Aust.	Tasmania.	N. Zealand.
1912–16 ..	66·6	71·0	73·3	69·7	70·7	71 2	52·5
1917–21 ..	60·2	64·3	66·6	60·3	64·0	64·3	48·1
1922–26 ..	50·3	57·4	58·0	50·0	53·6	54·0	41·1
1927–31 ..	44·6	52·0	50·0	45·3	47·7	53·4	35·1
1932–36 ..	39·4	41·9	42·3	34·1	40·9	45·2	31·6

In both tables Queensland still retains third place.

For a clear understanding of our infant mortality we must classify it according to its causation. An examination of certificates of death leads to the following table:—

INFANT MORTALITY—QUEENSLAND, 1931–1936.

Year.	Number of Births.	Deaths under one year.	Antenatal Causes.	Bronchitis and Pneumonia.	Diarrhœal Diseases.	Whooping Cough.	Diphtheria.	Influenza.	Measles.	Total from these infections.	All other causes.
1931 ..	17,833	652	462	63	34	9	2	6	..	17	76
1932 ..	17,367	699	508	64	34	14	4	10	..	28	62
1933 ..	17,150	731	500	86	39	13	3	13	4	33	73
1934 ..	17,360	705	511	58	25	32	4	5	1	42	68
1935 ..	17,688	659	481	59	26	13	2	6	1	22	71
1936 ..	18,755	679	490	75	29	9	5	5	1	20	65

It will be noted that the mortality from diarrhœal diseases, formerly the scourge of infancy, has now been reduced to comparatively small proportions. That from bronchitis, pneumonia, and several respiratory infections, which are less easily controlled, forms a variable factor. But the most prominent feature is the great preponderance of deaths from antenatal causes, and to this we shall now devote special attention.

The same fact comes out if we classify the deaths according to age.

QUEENSLAND.

—	1934.	1935.	1936.
Deaths during first week ..	432	417	427
Mortality per 1,000 births ..	24·9	23·6	22·8
Deaths during first month ..	503	482	494
Mortality	29·0	27·3	26·3
Deaths during next 11 months	202	177	185
Mortality	11·6	10·0	9·9

Deaths during the first month, 86 per cent. of which occur during the first week, are almost wholly due to antenatal causes.

THE BIRTHRATE.

The birthrate for Queensland in 1936 per 1,000 births was 19·17, a small rise since 1935, when it was 18·31.

Birthrate per 1,000 Population, Queensland.	
1921	26·68
1927	22·78
1931	19·28
1936	19·17

For the whole of Australia the birthrate per 1,000 population in 1936 was 17·13, which also shows a slight rise over that of 1935, which was 16·55.

Comparing the birthrates of the Australian States per 1,000 population in 1936, Queensland takes the second place. A truer comparison would be based on the number of women of child-bearing age in each State. Here Queensland takes the third place, its ratio being lower than that of Western Australia by a small fraction.

BIRTH RATES, 1936.

——	Per 1000 Population.	Per 1000 women aged 15–44.
New South Wales	17·31	76·1
Victoria	15·63	67·1
Queensland	19·17	86·3
South Australia	15·17	65·3
West Australia	18·84	86·9
Tasmania	19·84	89·1

CHILD MORTALITY IN QUEENSLAND PER 1,000 POPULATION.

Year.	1 to 2 years of age.	2 to 5 years of age.
1928	9·2	3·5
1929	8·9	3·4
1930	6·7	2·5
1931	5·4	3·1
1932	6·0	2·2
1933	6·9	2·3
1934	6·3	2·6
1935	6·6	2·6
1936	7·1	2·0

These figures do not take into account the effects of our diminishing birthrate in reducing the proportion of young children in our population. It is only in census years that this proportion is exactly known, but its diminution has the tendency to render the apparent mortality rates at these ages during recent years somewhat smaller, than it would be, if it were possible to make allowance for this error. Any correction that could be made would only emphasise the conclusion, that may be drawn from these figures, that there has been no fall in the deathrate between one and two years since 1931. In the two to five years' period the record is fluctuating and less consistent, but here also there has been no steady fall since 1930, and a correction for the age distribution of our population, would probably make this more evident, than it is from the figures given.

OUR MATERNAL AND CHILD WELFARE WORK IN 1936-37.

The work of our baby clinics has increased steadily, indeed rapidly, during the past year. The total attendances show an increase of 31,703, of which only 1,994 came from the new branches, which were opened too late in the year to materially affect the total.

Year.	Total Attendances.	Attendances of Infants and Children Only.
1934–35	136,925	107,636
1935–36	168,002	146,880
1936–37	199,705	175,338

NEW BRANCHES AND OTHER CHANGES.

In connection with the Maryborough centre new branches were opened at Howard (12th January), at Childers (5th May), and at Pialba (6th May). A new branch visited from the Gympie centre was opened at Pomona (6th April). In the South Burnett four new branches have been opened at Kingaroy (5th April), Murgon (9th April), Wondai (8th April), and Nanango (7th April), under the charge of a nurse residing in Kingaroy. Another four were opened in the Central Burnett, at Gayndah (22nd April), Biggenden (23rd April), Mundubbera (24th April), and Eidsvold (27th April). In the North, a new nurse has been appointed to Innisfail (13th March), and has taken over the Babinda branch, together with new branches at Tully (18th March) and El Arish (19th March). A new branch has been opened at Mossman (18th March) in connection with the Cairns centre; but one of the nurses at Cairns has been removed to the Tableland, taking over the Atherton branch, and opening new branches at Mareeba (13th March), Herberton (11th March), Malanda (23rd March), and Millaa-Millaa (16th March). Altogether, by the addition of three nurses to our staff, we have been able to open nineteen new branches, most of which have already made a promising beginning.

VISITS BY CLINIC NURSES.

The number of visits to new borns has increased, and the total number of visits has been well maintained.

Year.	Visits to Newborns.	Subequent and Other Visits.	Total.
1935–36	7,888	4,732	12,620
1936–37	8,419	4,375	12,794

NUMBER OF NEW CASES SEEN AT THE CLINICS.

——	1933–4.	1934–5.	1935–6.	1936–7.
Infants under one year	6,131	7,027	8,024	8,907
One to two years	623	669	781	729
Over two years	1,698	1,698	1,987	1,529
Total Children and Infants	8,542	9,394	10,792	11,165
Expectant mothers	778	882	1,074	1,203
Non-expectant mothers	4,846	5,671	6,748	7,625
Total mothers needing advice	5,264	6,553	7,822	8,828
Total all new cases	14,076	15,946	18,614	19,993

PERCENTAGE OF INFANTS BORN BROUGHT TO CLINICS.

Births during Year.		Number brought to Clinics Under One Year.		Percentage.
1927 ..	19,830	1927–28 ..	6,021	30
1928 ..	19,783	1928–29 ..	6,286	32
1929 ..	18,487	1929–30 ..	6,408	35
1930 ..	18,939	1930–31 ..	6,576	35
1931 ..	17,833	1931–32 ..	6,225	35
1932 ..	17,367	1932–33 ..	6,197	36
1933 ..	17,150	1933–34 ..	6,131	36
1934 ..	17,360	1934–35 ..	7,027	40
1935 ..	17,688	1935–36 ..	8,024	45
1936 ..	18,755	1936–37 ..	8,907	47·5

For some years this percentage remained stationary, but has grown steadily since 1933. It has not yet attained 50 per cent.

These figures do not include cases seen on the infant welfare railway car, nor those whom we reach by correspondence, by the Queensland Mothers' Book, or who are advised by nurses who have been through our course of instruction, but are not on our staff.

THE INFANT WELFARE RAILWAY CAR.

Centres visited, 164; children and mothers attending for advice, 1,260; women at health lectures, 769; school children at health talks, 8,425.

So many of the larger places formerly visited have now their own branches that the car stops at places of smaller population, and consequently the attendances are smaller than they used to be.

THE BRISBANE ANTENATAL CLINICS.

The two antenatal clinics under the direction of Dr. Beatrice Warner have had a busy year, and the number of new cases is increasing.

ANTENATAL CLINICS.

—	1934-5.		1935-6.		1936-7.	
	New Cases.	Attendances.	New Cases.	Attendances.	New Cases.	Attendances.
Alfred street, Valley	338	1,001	335	1,154	295	1,062
Woolloongabba	246	874	245	924	304	997
Totals	584	1,875	580	2,078	599	2,059

ATTENDANCES AT THE BABY CLINICS. (Infants and Children)

—	1934–5.	1935–6.	1936–7.
Metropolitan.			
Valley Centre	13,003	13,681	14,384
Branches—			
Cribb Island	28	306	383
Enoggera	19	817	813
Kedron	865	769	916
Nundah	2,003	1,696	2,082
Sandgate	1,624	1,570	1,760
Zillmere	32	292	156
Total	17,574	19,131	20,494
Herschell Street Centre ..	13,017	13,457	14,720
Branch—			
Indooroopilly	160	697	569
Total ..	13,177	14,154	15,289
Woolloongabba Centre ..	13,601	14,061	15,601
Branches—			
Bulimba	1,214	898	980
Morningside	104	916	702
Yeronga	105	849	914
Total	15,024	16,724	18,197
West End Centre	3,850	3,798	4,206
Wynnum Centre	2,912	3,327	3,423
Country.			
Country Branches visited from Brisbane—			
Beaudesert	145	780	885
Caboolture	183	506	571
Nambour	205	980	963
Southport	346	1,025	1,335
Total	879	3,291	3,754

ATTENDANCES AT THE BABY CLINICS. (Infants and Children)—*continued.*

—	1934–5.	1935–6.	1936–7.
Ipswich Centre	5,001	5,249	5,039
Branches—			
Boonah	66	1,058	1,200
Esk	61	299	563
Goodna	35	142	174
Laidley	31	578	851
Lowood	36	429	607
Rosewood	102	878	765
Toogoolawah	19	367	603
Total	5,315	9,000	9,802
Toowoomba Centre ..	5,082	4,939	5,527
Branches—			
Allora	25	484	623
Clifton	20	390	368
Dalby	..	1,594	2,075
Gatton	..	413	432
Oakey	..	320	364
Pittsworth	..	303	554
Total	5,127	8,443	9,943
Warwick Centre	3,807	3,440	3,373
Branches—			
Goondiwindi	..	408	484
Inglewood	..	242	318
Killarney	..	219	219
Stanthorpe	..	921	1,363
Total	3,807	5,230	5,757
Gympie Centre	3,358	3,571	3,881
Branch—			
Pomona	..	..	88
Total	3,358	3,571	3,969
Maryborough Centre ..	4,822	5,402	5,632
Branches—			
Childers	..	..	35
Howard	..	..	244
Pialba	..	..	58
Total	4,822	5,402	5,969

ATTENDANCES AT THE BABY CLINICS. (Infants and Children)—*continued.*

——	1934–5.	1935–6.	1936–7.
Bundaberg Centre	6,156	6,120	6,618
Rockhampton Centre	6,731	7,969	9,340
Branches—			
Gladstone	89	1,107	1,487
Mount Larcom	173	771	893
Mount Morgan	95	888	1,192
Yeppoon	204	581	782
Total	7,292	11,316	13,694
Mackay Centre	6,771	7,404	8,524
Branches—			
Bowen	16	771	1,443
Proserpine	20	1,222	1,274
Sarina	204	613	638
Total	7,011	10,010	11,879
Townsville Centre	9,194	9,688	11,676
Branches—			
Ayr	50	1,596	3,024
Home Hill	20	1,606	1,370
Ingham	..	908	1,706
Total	9,264	13,798	17,776
Charters Towers Centre	3,368	2,955	3,436
Cairns Centre	5,177	5,896	6,211
Branches—			
Edmonton	270	346	302
Gordonvale	1,174	1,016	1,063
Mossman	..	..	105
Total	6,621	7,258	7,681
Tableland Branches—			
Atherton	981	797	943
Herberton	..	..	104
Malanda	..	..	110
Mareeba	..	..	184
Millaa Millaa	..	..	52
Total	981	797	1,393
Innisfail Branches—			
Babinda	1,075	1,205	1,307
El Arish	..	..	29
Innisfail	1,618	1,546	1,994
Tully	..	..	204
Total	2,693	2,751	3,534
Roma Branches—			
Chinchilla	..	..	335
Mitchell	..	..	704
Roma	..	..	1,405
Total	..	..	2,444
Western Branches—			
Charleville	..	..	1,640
Cunnamulla	..	..	847
Quilpie	..	..	489
Total	..	..	2,976
Central-Western Branches—			
Aramac	..	26	452
Barcaldine	..	44	984
Longreach	..	53	887
Total	..	123	2,323
South Burnett Branches—			
Kingaroy	..	..	217
Murgon	..	..	172
Nanango	..	..	86
Wondai	..	..	106
Total	..	..	581
Central Burnett Branches—			
Biggenden	..	..	51
Eidsvold	..	..	47
Gayndah	..	..	30
Mundubbera	..	..	72
Totals	..	..	200

The increasing popularity of our infant welfare service is well shown by the larger attendance at nearly all of our Central and branch clinics.

THE TRAINING CENTRE.

Fifty-four nurses have passed through our training school, and obtained their child welfare certificates.

We desire to express our thanks to the Queensland Country Women's Association, to the Department of Public Instruction, to the Railway Department and staff for the care they have taken of our nurses' comfort, to the newspapers that have published our monthly articles and other information, to 4QG for broadcasting, and to many good friends who have helped us.

This has been a most successful year, and our nurses deserve much credit for the great progress made.

I am, Sir,
Yours faithfully,
A. JEFFERIS TURNER,
M.D. Lond., D.P.H. Camb.,
Director of Infant Welfare.

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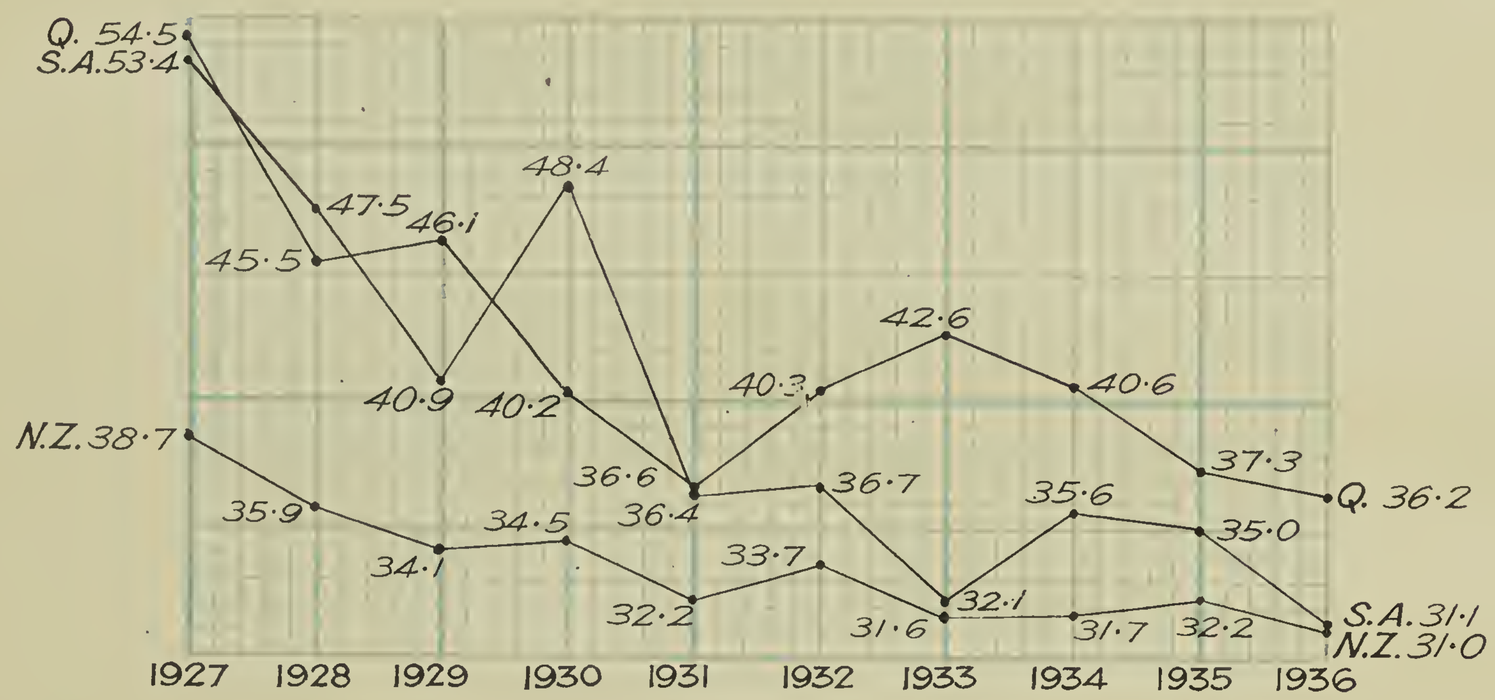
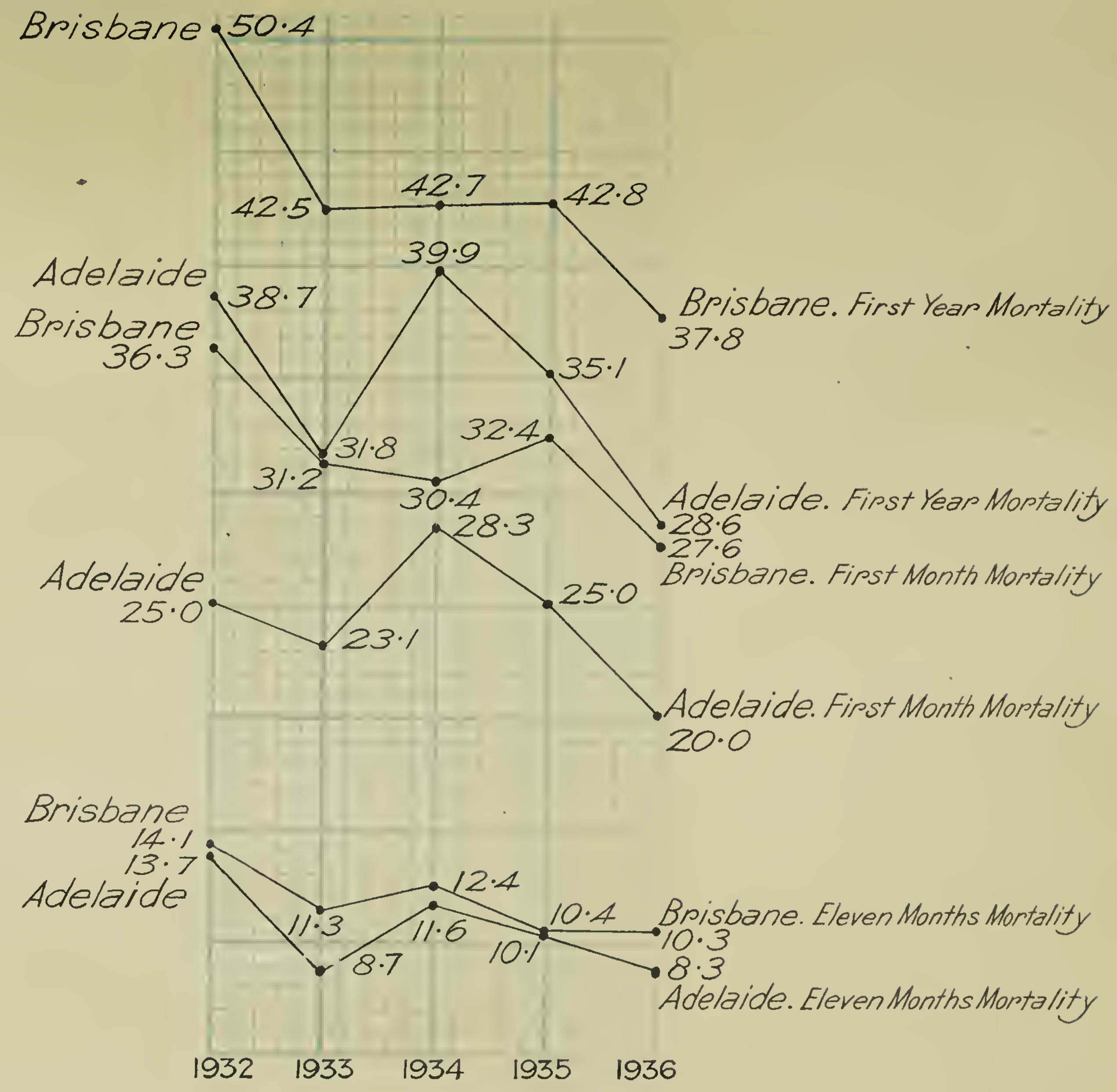


INFANT MORTALITY
QUEENSLAND, SOUTH AUSTRALIA, NEW ZEALAND



INFANT MORTALITY FOR FIRST YEAR, FIRST MONTH AND NEXT ELEVEN MONTHS.
BRISBANE AND ADELAIDE